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ELEMENTS

OF

MEDICAL JURISPRUDENCE.

BY

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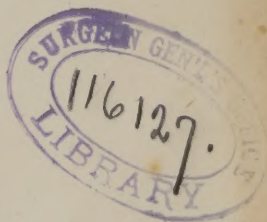
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TO THE
MEDICAL AND LEGAL PROFESSIONS
THROUGHOUT THE UNION,
THIS WORK
IS RESPECTFULLY INSCRIBED.

ADVERTISEMENT.

THE present edition, which owes its early appearance to the continued partiality of the public, has been carefully revised and amended. Many important additions will be found, particularly in the part relating to Persons Found Dead. And throughout, every exertion has been made, to render it a complete summary of the rapidly advancing state of the science of Legal Medicine.

JUNE, 15, 1838.

PREFACE TO THE FIFTH EDITION.

IN preparing the present edition of this work for the press, I have found that an amount of labour was required, equal to that originally bestowed on it. This has arisen from the numerous and important additions made to the science of Medical Jurisprudence during the last ten years. It has hence been necessary to revise every chapter, and several indeed have been nearly rewritten. I have also added essays on two subjects, not previously noticed, viz. Insurance upon Lives, and Medical Evidence. In its present extended, and, as I trust, improved form, I can only ask for it a portion of the favour with which my first efforts were so kindly received.

Besides the numerous printed works, from which I have derived most of my materials, and to which I have always given due credit, I must not omit acknowledging the use of the Manuscript Lectures of the late Professor STRINGHAM, and of Dr. WILLIAM DUNLOP. For the former, I am indebted to the kindness of his surviving relatives, M. HUNT and Jos. STRINGHAM, Esquires; and for the latter, as delivered at Edinburgh, to their author.

DRS. DUNLOP and DARWALL, the successive editors of the English editions, also enriched the work with numerous and valua-

ble notes. These I have preserved in the present edition, not only for their intrinsic worth, but as a mark of respect and gratitude for their labours.

I have continued to derive much assistance from the New York State Library, and the Libraries of the Western Medical College and the Albany Institute; while many of my legal and medical friends have allowed me the freest access to their private collections.

The chapter on Infanticide, originally contributed by my brother, has been again furnished by him in an enlarged and greatly improved form. I have considered it a bare act of justice, that the author of so important a portion of the work should be associated with me on the title page.

T. R. B.

ALBANY, November, 1835.

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INTRODUCTION.

MEDICAL JURISPRUDENCE, Legal Medicine, or Forensic Medicine, as it is variously termed, is that science which applies the principles and practice of the different branches of medicine to the elucidation of doubtful questions in courts of justice. By some authors, it is used in a more extensive sense, and also comprehends **MEDICAL POLICE**, or those medical precepts which may prove useful to the legislature or the magistracy. I shall employ it at this time in its restricted meaning.*

Traces of this science are to be found as early as the institution of civil society. Thus in the Jewish law, indications of it may be observed in the distinction established between mortal wounds, and those not so, and in the inquiries prescribed in cases of doubtful virginity. Among the Egyptians, according to Plutarch, it was ordained, that no pregnant woman should suffer afflictive punishment—while the Romans, even from that early period in which Numa Pompilius flourished, grounded many of their laws on the authority of ancient physicians and philosophers. *Propter auctoritatem doctissimi Hippocratis* is a phrase frequently met with in their decisions,† and the Emperor Adrian, in extending the term of legitimacy from ten months, (the period fixed by the Decemvirs, to eleven, was influenced, in so doing, by the prevailing sentiments of the physiologists of that day.‡ Some detached, but striking medico-legal facts, are also mentioned by the Roman historians. Thus, the bloody remains of Julius Cæsar, when exposed to public view, were examined by one Antistius, who declared, that out of twenty-three wounds which had been received, but one was mortal, and that had penetrated the thorax, between the first and second ribs. The body of Germa-

* If a general term be necessary to include both these sciences, I should prefer that used by the Germans, viz. **STATE MEDICINE**.

† Belloc, p. 6.

‡ Foderé. Introduction, p. xiv.

nicus was also inspected, and by indications conformable to the superstitions of the age, it was decided that he had been poisoned.*

The code of Justinian contains many provisions appertaining to this science, which we shall have frequent occasion to quote in the subsequent pages. Some of these indeed are incorporated into the laws of almost every civilized country at the present day.

All the laws of the ancients, however, and all the facts drawn from their history, are to be considered as merely the first glimmerings of knowledge on this subject—and knowledge too, founded on the imperfect diagnostics which medicine afforded at that early period. It was never ordained that physicians should be examined on any trial, until after the middle ages, and we are indebted to the Emperor Charles the Fifth of Germany, for the first public enactment, prescribing it as necessary, and thereby recognizing its value and importance. In the celebrated criminal code which was framed by him at Ratisbon, in 1532, and which is known by the name of the "*Constitutio Criminalis Carolina*," or the Caroline Code, it is ordained, that the opinion of medical men shall be formally taken in every case where death has been occasioned by violent means—such as child-murder, poisoning, wounds, hanging, drowning, the procuring of abortion, and the like.†

"The publication of such a code very naturally awakened the attention of the medical profession, and summoned numerous writers from its ranks."‡ It was the first regular commencement and origin of legal medicine, and it required only such an enactment to apprehend the utility of which it was susceptible.

The kings of France soon became aware of the value of similar institutions. In 1556, Henry the II. promulgated a law, by virtue of which, death was inflicted on the female who should conceal her pregnancy, and destroy her offspring. In 1606, Henry the IV. presented letters patent to his first physician, by which he conferred on him the privilege of nominating two surgeons in every city and important town, whose duty it should exclusively be to examine all wounded or murdered persons, and to make

* Foderé. Introduction, p. xxx.

† "George Bishop of Bamberg in 1507, proclaimed a penal code, drawn up for his States by Baron Schwartzemberg, in which the necessity of medical evidence in certain cases, was recognized." The Caroline Code was founded on this. Dr. Traill in *Encyclopedia Britannica*, 7th edit. vol. 14, p. 490.

‡ Paris' Med. Jurisprudence, vol. 1, p. x.

reports thereon; and in 1667, Louis the XIV. formally declared, that no report should be valid unless it had received the sanction of at least one of these surgeons.* At a subsequent period (1692,) physicians were by law associated with surgeons in these examinations.

The writers who have investigated the science of medical jurisprudence, are numerous, and many of them have displayed great talent and acuteness. Some have noticed it as a system, while others have examined detached parts. I shall content myself with mentioning the more distinguished, as a catalogue of all these authors, with the titles of their works, would uselessly fill several pages.

Fortunatus Fidelis is probably the earliest writer on the science. He was an Italian, and his work, “*De Relationibus Medicorum*,” was published in 1598, at Palermo.† Paulus Zacchias soon followed him, in his great work, entitled, “*Questiones Medico-Legales*,” which appeared at Rome between 1621 and 1635.‡ This distinguished man rose to great eminence in his profession, and was physician to Pope Innocent the X. He died in 1659, in the 75th year of his age. His treatise on legal medicine, although partaking of the superstition of the age in which he lived, is still a most valuable record of facts, and a permanent monument of the talents of the author. The following is a general outline of the contents of the first volume. *First book.* Age: Legitimacy: Pregnancy: Superfœtation and Moles: Death during Delivery: Resemblance of children to their parents. *Second book.* Dementia: Poisoning. *Third book.* Impotence: Feigned diseases: The plague and contagion. *Fourth book.* Miracles: Rape. *Fifth book.* Fasting: Wounds: Mutilation: Salubrity of the air, &c. The second volume is principally filled with a discussion of casuistical questions.

In later times, no very distinguished authors have appeared in this country, although its physicians have not been deficient in the investigation of particular subjects. Tortosa, is spoken of, by Dr. Paris, as the best Italian systematic writer of the present century.

* Foderé, vol. 1. Introduction, p. xxxii.

† Dr. Cummin considers Condronchus as an earlier writer on Legal Medicine than Fidelis. He published in 1597, at Frankfort, his tract *Methodus Testificandi*. According to Dr. Cummin, Fidelis published in 1602. London Med. Gazette, vol. 19, p. 3.

‡ Life of Zacchias, prefixed to his *Questiones Medico-Legales*.

In Germany, Bohn was among the earliest writers, but his treatise is confined to a consideration of wounds. The *Pandects* of Valentini, which appeared in 1702, and which were shortly followed by his *Novellæ*, form a very complete and extensive retrospect of the opinions and decisions of preceding writers on legal medicine. They consist indeed of medico-legal cases, and the consultations of distinguished physicians, and of medical and legal faculties on them. Alberti, Zittman, Teichmeyer, Fazelius, Goelicke, Hebenstreit, Plenck, Daniel, Sikora, Ludwig, and Metzger, are also German authors of eminence in this branch of learning. But one of the most valuable and comprehensive collections that has ever appeared, is that edited by Schlegel. It consists of upwards of forty dissertations on various parts of medical jurisprudence, written by his countrymen at different periods during the eighteenth century, and is alike honourable to the national character, and the individuals whose investigations appear in it.

In our own days, the indefatigable industry and great learning of the Germans have furnished important contributions to the science. From a host of names, I will only select those of Henke, Bernt, Gmelin, Emmert, Jaeger, Kopp, Hecker, Hoffbauer, Remer and Wagner.

Foderé, in his sketch of the history of the science in France, considered Ambrose Paré as the earliest writer on it in that country. His chapter on Reports, and his observations on feigned diseases, indicate the talents for which he is still famous at the present day, and in such estimation were his works held in his native country, that for more than a century, they formed the sole guide of the French surgeon. To him, succeeded Gendri in 1650; Blegni in 1684, and Deveaux in 1693 and 1701. Their works were particularly intended for the benefit of surgeons, from whom, as I have already stated, the examiners in medico-legal cases were selected.

Louis is, however, considered, and with great justice, as the individual who first promulgated a just idea of the science to his countrymen. He investigated several important points with great ability—such as the certainty of the signs of death, protracted gestation, drowning, and the proofs that distinguish hanging through suicide, from hanging as an act of murder. His consultations also in various cases, and which are preserved in the

Causes Célèbres, abound in various and instructive learning. Some of his opinions gave rise to animated discussions, and thus excited public attention to these subjects generally. Winslow, Lorry, Lafosse and Chaussier, also deserve notice among the French writers, while towards the conclusion of the eighteenth century, Professor Mahon, with several others, published in the "*Encyclopedie Methodique*," copious dissertations on Medical Jurisprudence.*

In 1796, Foderé published the first edition of his work in three octavo volumes, under the title of "*Les lois éclairées par les sciences physiques, ou Traité de médecine légale et d'hygiène publique*." This learned physician was a resident of Strasburg, and the author of several other treatises of deserved reputation. In 1807, the system of Mahon, late Professor of Legal Medicine, and the History of Medicine in the school of Medicine at Paris, appeared, with notes, by M. Fautrel, and about the same time, Belloc, a surgeon at Agen, published his sensible and useful treatise in one volume. Marc, in 1808, presented a translation from the German, of the Manual of Rose on Medico-Legal Dissection, and enriched it with valuable notes, besides adding two most instructive dissertations—one on the *docimasia pulmonum*, and the other on *death by drowning*. In 1812, Ballard published a translation, also from the German, of Metzger's Principles of Legal Medicine. This work is peculiarly valuable for the great learning displayed in its notes, and the opportunity thus afforded, of becoming acquainted with the sentiments of authors whose writings are either inaccessible, or in some degree antiquated.

After bestowing great labour during several years, a second edition of his treatise was published by Foderé in 1813. It was now extended to six volumes—four on legal medicine, and two on medical police, and was undoubtedly, at the time of its publication, the most valuable systematic work on the science in the French language.†

After a few years there appeared in Paris, one of the most original publications that the present age has yet afforded. I refer to the system of Toxicology by Orfila, a Spaniard by birth, but naturalised and permanently resident in France. This is copi-

* Foderé, vol. 1, Introduction, p. xxxvii., etc.

† Professor Foderé died at Strasburg in February of the present year, (1835,) in the 72d year of his age.

ous, beyond all former treatises, in original experiments, and it has done much to increase our knowledge of the action and the tests of individual poisons. The career of Orfila, so splendidly commenced, has been successfully and ardently pursued; and his lectures on Legal Medicine, his work on Juridical Disinterments, and his numerous essays on detached subjects, have all served to improve and advance his favourite science.

In 1821, Professor Capuron published on legal medicine, so far as it relates to midwifery. Briand, Biessy, Esquirol,orget. Falret, Marc, and many others, have either written regular treatises, or published on some one or other of the subjects included in the range of legal medicine. The most valuable French work, however, of the present day, is the *Annales D'Hygiène et de Médecine Légale*. This is issued quarterly, and is conducted by some of the ablest medical men in the kingdom. In 1836, Dr. Devergie published an elaborate and able treatise on Legal Medicine. It is peculiarly interesting on the subject of persons found dead.

The first work, professing to treat of Medical Jurisprudence, that appeared in England, was the production of Dr. Farr. It was in 1788, and in his preface he mentions that it is derived from Fazellius' Elements of Forensic Medicine. It is brief and imperfect, extending only to one hundred and forty duodecimo pages. It arrived at a second edition in 1814. The "*Medical Ethics*," of Percival, contain some useful facts, and Dr. William Hunter, in his essay "*on the uncertainty of the signs of murder in the case of bastard children*," examined a most important and leading subject in medical jurisprudence. In 1815, Dr. Bartley of Bristol, published a few essays on some points connected with midwifery.

Dr. Male of Birmingham, in 1816, presented the first English original work of any magnitude or value, on medical jurisprudence. A second edition appeared in 1818. In 1821, Dr John Gordon Smith published his excellent treatise, entitled "*The Principles of Forensic Medicine, systematically arranged and applied to British practice*." This work has passed through several editions. Dr. Smith also published separate treatises on Medical Evidence, and on the examination of witnesses, and was much engaged as a lecturer on the science.*

* Dr. Smith died not long since. "To him," I may say, in the language of Dr. Conolly, "the science of Medical Jurisprudence will always remain indebted, and

In 1823, an elaborate and able work on "Medical Jurisprudence," in three octavo volumes, was offered to the British public by the eminent Dr. Paris and Mr. Fonblanque, a barrister. Sin that time, the Manual of Dr. Ryan, the valuable and copious Treatise of Professor Christison on Poisons, undoubtedly the best in the language, and the contributions of the writers in the Cyclopaedia of Practical Medicine, are among the most important additions to our knowledge of the subject. I must now (1838,) subjoin to these, the treatises of Dr. Montgomery, Mr. Taylor and Mr. Watson, and the lectures of Drs. Cummin, A. T. Thomson and Southwood Smith.

I must not, however, omit to mention the many valuable as well as original communications on the science, contained in the British Medical Periodicals, and particularly in the Edinburgh Medical and Surgical Journal. Here the productions of Drs. Andrew Duncan, jun. and Christison are to be found, illustrating every subject on which they touch.

Dr. Andrew Duncan, jun. was the first professor of Medical Jurisprudence in any British University. His venerable father had, for some years previous, urged its importance on the public, and even delivered, I believe, a course of private lectures,* but it was not until 1806, that Dr. Duncan, jun. received his appointment.†

On the removal of Dr. Duncan to the chair of *Materia Medica*, he was succeeded by Dr. Christison, who again, on the death of

it ought never to be forgotten, that he was one of the first to show, and zealously to advocate, what all now acknowledge, its usefulness and dignity." Transactions Provincial Med. and Surg. Association, vol. 3, p. 40.

* A sketch of the subjects included in the sciences of Medical Jurisprudence and Medical Police, may be found in an Analysis of Dr. Duncan, Senr's Memorial, presented to the patrons of the University at Edinburgh, in 1798. (Coxe's Medical Museum, vol. 5, Appendix, p. 74.)

† Dr. Gordon Smith, in the Introduction to his second edition, (p. 18,) says, that Dr. Duncan received the appointment in 1806. Dr. Paris, (Introduction, p. xxvi.) on the contrary, mentions 1803, as the period. It was for this appointment, that the Fox Ministry of that day were so much reviled. The following extract from a contemporary publication, will explain the nature of the attacks. In the house of Commons, June 30, 1807, Mr. Percival, in moving for the renewal of the Finance committee, took occasion to attack the abolition ministry, which had just been turned out. Among other things, he said, "He should not dwell in detail upon all the acts of the late administration, but he confessed himself at a loss to understand what they could mean by the appointment of a professor of Medical Jurisprudence. He acknowledged that he was ignorant of the duty of that professor, and could not comprehend what was meant by the science he professed." On the same day, Mr. Canning said, "He could alone account for such a nomination, by supposing, that after some long debate, in the swell of insolence, and to show how far they could go, they had said, 'we will show them what we can do—we will create a professor of Medical Jurisprudence.'" (Stockdale's New Annual Register, 1807, p. 206, 210.)

the former, succeeded his teacher and friend. Dr. Traill, is the present professor of Medical Jurisprudence at Edinburgh.

Among the earlier lecturers on this science in Great Britain, may be named Dr. George Pearson, W. T. Brande, Esq., Dr. Harrison, Dr. Elliotson, Dr. Gordon Smith, and Dr. Ryan. By a regulation of the Society of Apothecaries, adopted a few years since, an attendance on a course of lectures on Forensic Medicine was made a requisite for examination, and the result has been a large increase in the number of teachers. I have prepared from various sources, a list of these during the Medical sessions of 1833-34, and 1834-35, which will be found in the subjoined note.*

	* Session 1833-34.	Session 1834-35.
University of Edinburgh, - - -	Dr. Traill.	Dr. Traill.
London University, - - -	Dr. A. T. Thomson.	Dr. A. T. Thomson.
King's College, London, - - -	Dr. T. Watson.	Dr. T. Watson.
Guy's Hospital, - - -	Mr. A. Taylor.	Mr. A. Taylor.
St. Bartholomew's Hospital, - - -	Dr. Roupell and Dr. George Burrows.	Dr. G. Burrows.
St. George's Hospital, - - -	Dr. Seymour and Mr. Dr. H. Davies.	C. Hawkins.
St. Thomas's Hospital, - - -	Dr. Lister and Mr. R. Phillips.	Dr. Lister and Mr. R. Phillips.
London Hospital, - - -	Dr. Cobb, Dr. F. H. Ramsbotham and Mr. Percira.	The same.
Westminster Hospital, - - -		Dr. R. H. Graham.
Theatre of Anatomy, Webb-street, Maze Pond, - - -	Dr. Southwood Smith and Mr. Cooper.	The same.
Theatre of Anatomy, Little Windmill-street, - - -	Dr. Sigmond, Dr. Jewell and Mr. Everett.	Dr. Jewell and Mr. Everett.
Central School of Medicine, St. George and St. James's Dispensary, - - -	Dr. Wyatt Crane.	
Western Dispensary, - - -	Dr. Clendenning.	
Medical School, Aldersgate-street, - - -	Dr. W. Cummin.	Dr. W. Cummin.
Westminster School of Medicine, - - -	Dr. Ryan and Mr. Crump.	
School of Anatomy and Medicine, Giltspur-street, - - -	Mr. Barnes and Mr. Wheeler.	Mr. Hemming and Mr. Barnes.
Charing Cross Hospital, - - -		Dr. Sigmond, Dr. Chowne and Mr. Maughan.
Medical School, Westminster Dispensary, - - -		Dr. Ryan.
Theatre of Anatomy and Medicine, adjoining St. George's Hospital, - - -		S. D. Broughton, medical, and J. W. Willcock, legal.
School of Medicine, Medical Dispensary, 13 Fore-street, Cripplegate, - - -		Dr. Venables and Dr. Blundell.
Practical School of Medicine, founded by J. Brookes, Blenheim-street, - - -		Dr. Litchfield.
Medical School, Brown sq. Edinburgh, - - -	Dr. Fletcher.	Dr. Fletcher.
Lecturer in Edinburgh, - - -		Dr. Howison.
Royal College of Surgeons, Ireland, - - -	Dr. T. Beatty.	Dr. T. Beatty.
Dublin School of Anatomy, Surgery and Medicine, Digges-street, - - -	Dr. G. C. Watson.	

This brief outline may suffice to give some idea of the ardour with which medical jurisprudence is investigated in Europe. Undoubtedly it has made the most rapid progress during the last twenty years, but its benefits to the community and to the profession are but just developing.*

In turning to my native country, I must premise, that as our literature has been in a great degree derived from that of Great Britain, so the objects of study will frequently be those which are there the most popular. Hence, probably, the reason why medical jurisprudence attracted but little attention until of late years. In 1810, the venerable and distinguished Dr. Rush delivered an introductory lecture in the University of Pennsylvania, (and which was published in 1811,) in which he dwelt in an eloquent and impressive manner on the importance of the study. In the conclusion, he thus forcibly establishes the utility of the science. "To animate you to apply to the study of all the subjects enumerated in the introduction to our lecture, I beg you to recollect the extent of the services you will thereby be enabled to render to individuals and the public: fraud and violence may be detected and punished; unmerited infamy and death may be prevented; the widow and the orphan may be saved from ruin; virgin purity and innocence may be vindicated; conjugal harmony and happiness may be restored; unjust and oppressive demands upon the services of your fellow citizens may be obviated; and the sources

	<i>Session 1833-34.</i>	<i>Session 1834-35.</i>
School of Medicine, Anatomy and Surgery, Park-street, Dublin, - - -	Dr. Thomas G. Geoghegan.	
Leeds School of Medicine, - - -	Dr. Disney Thorp.	Dr. Disney Thorp.
Manchester School of Medicine - -	Mr. Ollier.	Mr. Ollier.
Birmingham School of Medicine, -	Dr. Birt Davies.	Dr. Birt Davies.
Sheffield Medical School, - - -	Mr. Palfreyman and Mr. Thomas.	The same.
Bristol Medical School, - - -	Dr. J. A. Symonds and Mr. Herepath.	Dr. Symonds.
Newcastle-upon-Tyne, - - -	Dr. George Fife.	
Andersonian University, Glasgow, -	Mr. Watt.	Mr. Watt.
Medical School, Portland-street Glasgow,	Dr. Pagan.	
Sheffield School of Anatomy and Medicine, - - -		Dr. Thompson and Mr. Law.
Liverpool Royal Institution, - - -		F. R. Philip, M. B., and Dr. Malins.
Nottingham, - - -		C. Attenburrow.

The Lecturers on Medical Jurisprudence in London, during the Sessions of 1831-32, and 1832-33, are mentioned in the *Lancet*, N. S. vol. 9, p. 16, and vol. 11, p. 1.

* A copious list of authors on the science may be found in the notes to Metzger, p. 285 to 306; in Brendel, p. 61; but above all, in Wildberg's *Bibliotheca Medicinæ Forensis*. Berlin, 1819.

of public misery in epidemic diseases may be removed, by your testimony in courts of justice.”*

In 1819, Dr. Thomas Cooper, formerly a judge in Pennsylvania, and lately president of the college of South Carolina, republished in one volume, several English tracts on medical jurisprudence, viz: Farr, Dease, Male, together with Haslam on Insanity. To these he added copious notes, and a digest of the law relative to Insanity and Nuisance. This compilation has proved a very useful introduction to the study of the science. If to these be added the publication of the different editions of the present work, the reprints of Ryan and Chitty, the former with notes by Dr. Griffiths, Professor Ducatel's Manual of Toxicology, and the manual of Dr. Williams, I shall have noticed the principal American publications on the science. Several valuable inaugural dissertations, with numerous cases and essays in the medical journals must, however, be also mentioned, in order to complete the enumeration of what has been done in the United States.

The individual who first delivered a course of lectures on Medical Jurisprudence in this country, was the late James S. Stringham, M. D. of New York. Having been a pupil of this gentleman, and thus derived my first impulse to the study, I may be indulged in adding a few particulars of his life.

Dr. Stringham was a native of the city of New York, and received there the elements of a classical education. He graduated at Columbia College in 1793. Having selected Medicine as his profession, he became a pupil of the late Dr. Samuel Bard and Dr. Hosack, and diligently attended to all the branches of Medicine then taught in New York. He subsequently repaired to Edinburgh, became a student in the University, and in 1799 received from it the degree of M. D.

Shortly after his return to his native country, he was elected Professor of Chemistry in Columbia College, and for several years delivered lectures on that science. In 1804, he voluntarily added to these a course on legal medicine. The popularity of this secured its repetition during each succeeding session until his resignation.

In 1813, he was appointed Professor of Medical Jurisprudence in the College of Physicians and Surgeons of New York, but his

* Rush's Introductory Lectures, p. 392.

health shortly thereafter became impaired, and he died at the island of St Croix (whither he had gone under the hope of improvement,) on the 29th of June, 1817.

Besides his inaugural dissertation, "*de absorbentium systemate*," Dr. Stringham was the author of several essays and papers in the medical journals of the day. He published in the *New York Medical Repository* an account of the efficacy of *Digitalis purpurea* in allaying excessive action of the sanguiferous system; a description of a remarkable species of intestinal vermes; an account of the violent effects of corrosive sublimate, and a case of hydrocephalus: in the *Philadelphia Medical Museum*, a paper on the diuretic effects of mercury in a case of syphilis, and in the *Edinburgh Medical and Surgical Journal*, a paper on the yellow fever of America.

A syllabus of the Lectures of Professor Stringham is contained in the American Medical and Philosophical Register.* The subjects noticed by him were as follows: Age, propriety of the cæsarean operation, virginity and rape, concealed pregnancy, pretended pregnancy, quickening, abortion, superfœtation, monstrosity, hermaphrodites, impotence and sterility, feigned diseases, concealed diseases, poisons, medico-legal dissection, wounds, infanticide, death from hanging and drowning, medical etiquette, effects of particular manufactories on health, salubrity of water.

In 1812-13, Dr. Charles Caldwell (now of the Louisville Medical College, Kentucky,) delivered a course of lectures on Medical Jurisprudence at Philadelphia. In 1815, I was appointed to this duty in the Western Medical College. Not long after, Dr. Walter Channing was appointed Professor of Midwifery and Medical Jurisprudence in Harvard University. Dr. Williams, late Professor in the Berkshire Medical Institution, and Dr. Hale of Boston, each lectured on the science in the winter of 1823. Since that period, all our medical schools have more or less made it a subject of instruction.

It only remains to offer some observations on the arrangement that has been adopted in the present work.

Some writers endeavour to divide the subjects, according to the courts before which they may arise, and thus devote separate chapters to civil and criminal cases. It will, however, be readily

perceived that this must render the study confused. Pregnancy, for example, may be a subject of inquiry on a plea for a delay of execution, or on the application of an heir for his property. In both instances its signs require examination. So also with insanity and several other topics. It will hence only lead to repetition to adopt this division. Foderé has escaped from the difficulty by including these subjects under the title of "*Médecine Légale Mixte*," applicable both to civil and criminal cases, but this is evidently an evasion. Dr. Gordon Smith arranges his subjects into three parts. 1. Questions that regard the extinction of human life. 2. Questions arising from injuries done to the person, not leading to the extinction of life; and 3. Disqualifications for the discharge of social or civil functions.

I must confess that I have found a difficulty to attend all these attempts at arrangement, which is probably insurmountable. The subjects comprehended under the science are not of a nature to admit of a division similar to that proposed by either of the above writers. I have preferred noticing each head of discussion separately and independently. Before a legal tribunal they must be thus investigated, and the nearer we approach in our studies to this, the easier will be their application to practice.*

The general arrangement is thus, I apprehend, not a matter of great moment, but on taking up a distinct topic, the first question which I have proposed to myself has been the following: *How can the examination of this point come before a judicial tribunal?* Having ascertained and stated this, I proceed to notice the physiological, pathological, or chemical facts, that are necessary to be known in the supposed case—advert to the difficulties to be encountered in the investigation—and offer, if necessary, some observations on the conformity of the law to the present state of

* I subjoin some of the latest divisions proposed, from which the reader can select such as appear most comprehensive, as well as discriminating. Dr. Elliotson's division is into three parts. 1. Those subjects which respect the human body in health. 2. Those which respect it, when labouring under disease. 3. Those which respect it, when deprived of its life, or suffering from violence calculated to destroy its life. Dr. Elliotson supposed this original, but subsequently found in Valentini a similar division into physiological and pathological, (Introductory Lecture, p. 5.) Dr. Thomson's and Professor Amos' division is as follows: 1. Subjects connected with social relationship. 2. Connected with the constitution of society, and under this are arranged, legitimacy, insurance and insanity. 3. Subjects connected with personal safety and life. (London University Calendar, 1832, p. 176.) Lastly, Dr. George Burrows divides the subject into two parts. 1. All questions relating to the death or injury of individuals, whether arising from violence, accidents, or any other sudden cause. 2. All questions relating to the social condition of individuals, and which may become the subject of legal inquiry. (Introductory Lecture, p. 13.)

medical knowledge. A collection of detached essays of this description (for they evidently are detached in their subjects and in their application,) must prove in a great degree useful, both to the lawyer and the physician, since it enables them, in their respective capacities, to review the information that is immediately applicable to a particular instance before them. That my former imperfect attempt has met in some degree with the approbation of the learned and wise in both professions, is my best reward for the labour bestowed on it.

Memorandum. A catalogue of books consulted, will be found at the end of the second volume.



MEDICAL JURISPRUDENCE.

CHAPTER I.

FEIGNED DISEASES.

Objects for which diseases are feigned. Diseases most readily feigned. General rules for their detection. Various divisions that have been proposed. Diseases that have been feigned: Fevers, diseases of the heart, including alterations of the pulse—consumption—hepatitis—rheumatism—lumbago—sciatica—pain in the hip and knee—*tic douloureux*—hæmoptysis—hæmatemesis—bloody urine—hæmorrhoids—menstruation—jaundice—paleness of the skin—cachexia—diarrhœa—dysentery—involutionary stools—vomiting—apoplexy—vertigo—paralysis—epilepsy—convulsions—chorea—catalepsy—syncope—hysteria—somnolency—hydrophobia—tetanus—nostalgia—scrofula—scurvy—cutaneous affections—incontinence of urine—gonorrhœa—stricture—excretion of calculi—near-sightedness—ophthalmia—amaurosis—night-blindness—deafness—deaf and dumb—stuttering and stammering—tumours—hydrocephalus—emphysema—dropsy—tyimpanitis—physconia—prolapse of rectum and uterus—polypus of the nose—hydatids—Barbadoes leg—hydrocele—hernia—contractions and deformity—lameness—distortions—ulcers—cancers—petechiæ—ozæna—fistula in ano—wounds, fictitious and factitious—fractures—maiming. Of impostors—feigned abstinence.

DISEASES are generally feigned from one of three causes—fear, shame, or the hope of gain. Thus the individual ordered on service, will pretend being afflicted with various maladies, to escape the performance of military duty; the mendicant, to avoid labour, and to impose on public or private beneficence; and the criminal, to prevent the infliction of punishment. The spirit of revenge, and the hope of receiving exorbitant damages, have also induced some to magnify slight ailments into serious and alarming illness.

The extent and finish to which the art of feigning diseases is carried, are various, and differ in different countries. Of his own nation, Foderé observed, at the time when the conscription was in full force in France, “that it is at present brought to such perfection as to render it as difficult to detect a feigned disease, as to cure a real one.”* So also in England, from the efforts re-

* Foderé, vol. ii. p. 452.

quired to carry on her wars with Napoleon, cases of feigned diseases greatly multiplied in her armies and navies. A favourite object with many was to obtain a discharge from the service, either with or without a pension.*

Against such impositions, the police of every well-regulated country should direct its energies. A severe injury may not only be inflicted on individuals through them, but the public morals may be deteriorated. In almost every age, impostors have sprung up, who affect various maladies, and operate on the superstition or the curiosity of the vulgar. And even the higher ranks of society, from motives as unworthy, have occasionally, like the courtiers of Dionysius and Lewis XIV. given a sanction to such practices.

It will readily be observed, that a knowledge of this subject may frequently be necessary both in civil and criminal cases, and also in the due administration of MEDICAL POLICE. To prevent the necessity of repetition, I shall consider it at length under the present division of our subject.

All maladies are not equally capable of being feigned. It is difficult to pretend those, whose diagnostic symptoms are certain and established, and whose natural course it is to effect a great change in the system, and to alter the various secretions and excretions in a perceptible manner: But such, on the contrary, as are variable and uncertain in their symptoms, and characterized by little or no change in the external appearance, or where the correctness of an opinion depends much on the statement which the patient may give, are most liable to be feigned. Of the first class may be named inflammations, continued fevers, purulent expectoration, &c.; and of the last, insanity, epilepsy, and pain. Not unfrequently, however, various substances are used to aid in misleading the examiner; and thus the entire skill of a medical man is often called into exercise, to ascertain the real state of the patient.

Zacchias, in his elaborate and learned work, has given five

* Mr. Lane in his account of the Modern Egyptians observes, "There is now (in 1834) seldom to be found in any of the villages, an able bodied youth or young man, who has not one or more of his teeth broken out, (that he may not be able to bite a cartridge) or a finger cut off, or an eye put out or blinded, to prevent his being taken for a recruit. Old women and others make a regular trade of going about from village to village to perform these operations upon the boys, and the parents themselves are sometimes the operators." Vol. i. p. 270.

general rules for the detection of feigned diseases, which are so discriminating as to have received the sanction of most succeeding writers. A detail of these will illustrate their universality of application, and the ingenuity of their author.*

1. The first is, that the physician must, in all suspected cases, inquire of the relatives and friends of the suspected individual, what are his physical and moral habits. He must ascertain the state of his affairs, and inquire what may possibly be the motive for feigning disease—particularly whether he is not in immediate danger of some punishment, from which this sickness may excuse him. It was on this principle, he observes, that Galen detected the imposture of his servant, who, when ordered to attend his master for a long journey, complained of an inflammation of the knee. He inquired into the habits and character of the slave, and ascertained that he was much attached to a female, whom this journey would compel him to leave. This, combined with the little alteration that so painful an affection as the one named induced, led him to examine the part, and at last ascertain that the swelling was occasioned by the application of the *thapsia* or *bastard turbith*, and which being prevented, the tumour disappeared.

2. Compare the disease under examination, with the causes capable of producing it; such as the age, temperament, and mode of life of the patient. Thus artifice might be suspected, if a person in high health, and correct in his diet, should suddenly fall into dropsy or cachexia; and again, if insanity should suddenly supervene, without any of its premonitory symptoms. It is contrary to experience to find such diseases occur without some previous indications.

3. The third rule is derived from the aversion of persons feigning disease to take proper remedies. This indeed will occur in real sickness; but it rarely happens when severe pain is present. Any thing that promises relief, is generally acceptable in such cases: Those, on the contrary, who feign, delay the use of

* A writer in the London Medical Gazette (vol. xvii. p. 989) has shown by a translation of Galen's Observations "*how to detect those who feign disease*," that he, instead of Zacchias, deserves the honour of first proposing these rules, "It is the oldest treatise extant, expressly devoted to a medico-legal subject."

The remarks of Galen relate to feigned hæmoptisis, insanity and pain, and their symptoms. One observation deserves mention. "When a feigner is asked about the pain he feels, he always describes it as settled in the part which he says is affected." This is not always the case. The pain is sometimes fixed and confined to one part, and sometimes felt extensively over adjoining and even distant parts.

means. Galen (says Mahon*) thus ascertained deceit in another case. An individual complained of a violent colic, on being summoned to attend an assembly of the people. Suspecting artifice, he prescribed only a few fomentations, although this same person had not long before been cured of the same complaint by the use of *philonium*. Of this, however, he never spake, nor indeed seemed the least anxious for medical aid.

4. Particular attention should be paid to the symptoms present, and whether they necessarily belong to the disease. An expert physician may thus cause a patient to fall into contradiction, and lead him to a statement which is incompatible with the nature of the complaint. To effect this, it is necessary to visit him frequently and unexpectedly.

5. The last direction is to follow the course of the complaint, and attend to the circumstances which successively occur. Thus the inflammation of the knee above noticed should have produced fever, and increased in violence, according to the common course, when no remedies are applied.†

Before proceeding to notice separately the various diseases that may be feigned, it will be proper to advert to a species of simulation mentioned by Zacchias, under the name of *simulatio latens*. By this he understands a case in which disease is actually present, but where the symptoms are falsely aggravated, and greater sickness is pretended than really exists. This may be more difficult of detection in some respects; and it requires, like the cases above noticed, the skill of the physician, and that too of one experienced in the history of disease, to guide aright. Generally speaking, it will be his duty to steer a middle course between too great incredulity and too great confidence, and where the interests of a third person are not liable to be affected, to lean towards the patient. I can, however, imagine that cases have occurred in which disease has been magnified in order to increase damages, or to revenge insult. Here the conduct of the medical examiner must be cautious, and he should carefully apply the rules already laid down.‡

Several divisions of feigned diseases have been suggested. Thus Marc proposes to arrange them under the heads of *imitated* and *produced* diseases; (*par imitation et par provocation*.)

* Mahon, vol. i. p. 332.

† Zacchias, tom. i. p. 289.

‡ "Flagrantior equo.

"Non debet dolor esse viri, nec vulnere major," *Juvenal, Sat. 13,*

The authors of the article on this subject in the Cyclopaedia of Practical Medicine, say that they are referable to four groups: *feigned*, or altogether fictitious; *exaggerated*; *factitious*, being wholly produced by the patient, or with his concurrence; and lastly, *aggravated*, or real possibly at first, but intentionally increased by artificial means.

It is not necessary to notice them under either of these divisions at the present time. I propose to mention the principal diseases that have been feigned, somewhat in the usual nosological order, although it will hardly be possible to preserve this strictly; and shall then state under each the most approved mode of detection.*

Fever may be induced by the use of various stimulants, such as wine, brandy, cantharides, &c. It is often assumed, when a disease is suddenly necessary to avoid military requisitions, or the performance of work in prisons. Foderé states that he has observed a feverish state of the system thus induced by violent exercise, and then calling for the physician, has noticed the patient imitating the cold fit to admiration. Dr. Cheyne was sent for to a soldier, who was said to be in the chill of an intermittent. He found him shaking violently; but on throwing off the bed-clothes, he was seen, not in the *cold*, but in the *sweating* stage, produced by his exertions. Of all cases of feigned fever, it may be remarked that they are ephemeral. A day or two's examination generally develops the deceit, as a frequent repetition of the use of stimulants is too hazardous, and real disease might then be the consequence. In doubtful cases, the remarks of Dr. Hennen should be remembered: "Neither the quickness of the

* The greatest difficulty in noticing this subject, is to select properly from the great mass of information that has of late years been afforded on it. The principal English authorities to which I have referred, in addition to systematic works, are, *Hennen's Military Surgery*.

Dr. *Copland Hutchison*, Surgeon to the Royal Naval Hospital at Deal, in the *London Medical and Physical Journal*, vol. 51, p. 87; and in his *Observations on Surgery*, p. 141 to 193.

Medical Report on the Feigned Diseases of Soldiers, in a letter to George Renny, M. D. Director General of Military Hospitals in Ireland, by *John Cheyne*, M. D. Physician General. *Dublin Hospital Reports*, vol. 4, p. 123 to 181.

Marshall's Hints to Young Medical Officers, &c.

The article, "Feigned Diseases," in the *Cyclopaedia of Practical Medicine*, by Drs. *Scott, Forbes and Marshall*. And

Sir *George Ballingall's Military Surgery*.

Professor *Dunglison*, in his *Medical Dictionary*, vol. 1, Art. Feigned Diseases, has given a tabular view of them, with the mode of excitation and detection.

pulse, nor the heat of the skin, are infallibly indicative of the presence of fever; and therefore it is that the state of the tongue, stomach, and stools, and of the senses, should be most particularly attended to.* And even these require close examination. In a soldier under Dr. Cheyne, where great complaint was made of pain in the chest, &c. the tongue was of a dry white appearance, made so by rubbing it with whiting from the wall. When washed with tepid water, it was clean and moist. Dr. Hutchison saw a French prisoner with an extremely small and rapid pulse; his tongue was covered with a brown coating, the eighth of an inch thick, and withal he was vomiting. The smell alone of the ejections proved that he had swallowed tobacco; and on removing the matter from the tongue, it was found to be common brown soap. After this, he recovered in a few hours. Chalk, pipe clay, brick dust, flour, have all been used for this purpose. I may also add, that those feigning intermittents often pretend that the chill comes on during the night. This is a very uncommon circumstance in ordinary practice.†

Diseases of the heart. The pulse is sometimes found extremely weak, and occasionally none is perceived at the wrist. Should deceit be suspected, the physician may examine whether ligatures have not been applied to interrupt the pulsation, and he should also ascertain whether the arteries beat at the corresponding extremity. I am indebted to my late worthy preceptor, Dr. McClelland, of Albany, for a case illustrating this point. During the period of his attendance at the Royal Infirmary in Edinburgh, a person applied for and obtained admission on the score of ill health, who had formerly been a patient there. The attending physician examined the pulse at the right wrist, but found none; he then tried the left, but with similar success. The trick was carried on for several days; at the end of which time, it was discovered that the patient was in sound health, but that whenever the pulse was to be examined, he pressed his finger on the artery under the armpit.‡

* Hennen, p. 198. "Scrubbing the skin with a hard brush, gives a flush difficult to distinguish from the colour caused by fever, and only to be detected by waiting patiently by the bedside until it subsides."—DUNLOP.

† Marshall, p. 110.

‡ "I have seen a gentleman, who, by the exertion of the muscles of the arm and thorax, could stop the action of the pulse at the wrist; but in so doing, he required to call into action all the muscles of the arm; so that should a *malingerer* attempt this, the cheat would easily be discovered by feeling the arm above the elbow. There was a preparation in the museum of Mr. Allan Burns, and which I believe

Ligatures have sometimes been applied, to produce the appearance of aneurism of the heart or great vessels. In two cases in France, they were found tightly bound round the neck, and one indeed was so fine that it was almost hid by the folds of the skin. The countenance was terribly swollen and livid; but on removing the ligatures from the neck, and in one instance also from the top of each arm, this purple and swollen state of the face disappeared, and the irregular action of the heart ceased.*

Internal remedies have also been used to produce palpitation and derangement of the functions of the heart. The powder of white hellebore was thus applied; at first, by a man who had lived with a veterinary surgeon. He not only produced the disorder in himself, but sold his secret and his drugs to others, so that many in the same corps (the marine artillery) were affected with it, and in consequence invalided, before the deception was discovered.† Dr. Quarrier, who has given us this account, states that suspicion was at length excited, and the secret was discovered by the confession of the individual. When a sudden and decisive result was sought for, as much as a drachm was given, and it caused vomiting, purging, syncope, tremors, and great nervous irritability, which were followed by great and inordinate action of the heart and arteries; and this in its turn was succeeded by great debility, or a disposition to paralysis. In smaller doses, and repeated, it caused disorder of the stomach, and violent and continued palpitations, &c. It was fortunate, according to Dr. Quarrier, that this article was frequently adulterated, as the effects in several instances were nearly fatal.‡ Garlic, to-

is at present in the possession of my friend Mr. G. S. Pattison of Baltimore, U. S. where a slip of muscle passed across the humeral artery, and impeded its action. On inquiry being made, it was found that the subject had been a servant girl; and though strong and healthy in other respects, she could never, for any length of time, pump a well or switch a carpet.

"In the army hospital, where I have been accustomed to skulkers of all kinds, whenever I suspected a man of deceiving me as to his pulse, I felt it at the temporal or carotid artery, under the pretext of saving him from the trouble of taking his arm from under the bedclothes." DUNLOP.

* Scott. Cyclop. Pract. Med. vol. 2, p. 138.

† "At the General Hospital at Chatham, this was lately practised to a great extent. The mode employed was, to take fifteen grains of hellebore, which produced great excitement, and which was maintained by taking four grains daily. The practice was introduced by a man who had been servant to a veterinary surgeon. One man took an overdose, and died in consequence." DUNLOP.

‡ Hutchison, p. 151 to 161. Dr. Cheyne expresses his conviction that many soldiers have the power of quickening their pulse, when they expect a visit. Thus he has found the beats as frequent as 120 or 130 in a minute, and on returning unexpectedly in a quarter of an hour, they were reduced to 30 or 40. Seamen sometimes produce this temporary quickness, by knocking their elbows against a beam.

bacco, and other irritating substances introduced into the rectum, have been known to cause violent palpitations and fever.

Consumption. This is sometimes feigned by men desirous of obtaining a discharge. They complain of pain in the chest, and cough; produce emaciation by abstinence and drinking vinegar; and mix up the expectoration, it may be of catarrh, with pus obtained from others, and tinge it with blood from the gums.* It requires, however, only a proper acquaintance with the phenomena of the real disease, and a sufficiently prolonged examination of the case, to detect it.

Hepatitis was often pretended by those who had been long in the East or West Indies; and they were often able to enumerate most of the symptoms correctly. One recruit, however, was so unfortunate as to refer his pain in the liver to the left side, and was cured by the *mistura diabolica* regularly exhibited.† The case however requires close examination, as to the pulse, local enlargement, secretions and excretions; and, above all, mercury (says Dr. Cheyne) should never be given in any the slightest doubtful case. The course of salivation is what is most desired by the malingerer.‡

Pain, under all its forms of *rheumatism*, *lumbago*, *sciatica*, or in the *hip and knee joints*, &c. is one of the most frequently simulated diseases; and in proportion to the facility of assuming it, must be the vigilance of those whose duty it is to detect the fraud. The inquiry should be made in all suspicious cases, where the disease is seated—what is probably its cause—the nature of the pain—its duration—its symptoms and effects, and what remedies have been already used?

The seat of pain is either the external or the internal parts. Patients will not so readily feign the former, since the deceit is liable to be soon detected; and in addition to this, it is generally of that kind which is deemed a slight disease. Pain in the external parts is, moreover, often accompanied with heat, red-

* Marshall, p. 120.

† Marshall, p. 114. This consists of Glauber's salts, infusion of tobacco, assafoetida, &c. given in small quantities, but so frequently repeated as to keep the taste in the mouth.

‡ Cheyne, p. 173.

ness, change of colour, or tumour. Gout is sometimes pretended, and above all rheumatism, for which the soldier is always ready to assign sleeping on the ground as a cause. Both of these diseases have diagnostic symptoms—redness, &c. in the one; and tumefaction, or diminution of size, with retraction or loss of motion, in the other. But it is equally true, that there are species of severe pain in which the physician can find no external appearances to found an opinion: and of this description are scorbutic and venereal pains. Internal pain is accompanied with symptoms which it is impossible to assume, and their absence will of course lead to suspicion. Thus pain in the head is attended with loss of sleep, vertigo, fever, and sometimes with delirium; in the thorax, with cough and difficult respiration; so also in the bowels and kidneys. Each has its peculiar symptoms; which, if the disease be real, are not periodical or occasional in their attack, but incessant, and their severity is generally greater during the night. Inquiry ought also to be made concerning the cause of sickness, and a comparison drawn between it and the violence of the malady. With respect to the species of pain, we should examine whether it be sharp, heavy or darting, and then compare this with the symptoms. It is, moreover, important to know the duration of the pain complained of; since it is very rare that it is prolonged for any length of time, without exhibiting manifest and unequivocal signs. If violent pain is stated to be present, and the patient notwithstanding enjoys a good appetite, and sleeps well, we have reason to doubt its severity. Much may also be learned from the remedies employed. Powerful ones are indicated if the disease be real, and the patient will not object to their application. It may also be proper to mix a little opium in the food of the patient; and if sleep be thus readily induced, we may form an opinion as to the magnitude of the disease.

Notwithstanding the above directions, instances have occurred of physicians mistaking real pain for feigned, and feigned for real. “I refused,” says Foderé, “for fifteen years, a certificate of exemption to a young soldier, who complained of violent pain, sometimes in one limb, and sometimes in another, and occasionally in the thorax or pericranium, without any external sign to indicate its existence. He died at last in the hospital, from the effects of the malady, which he always insisted was a species of

rheumatism. I examined the body after death, viewed all the former seats of disease, but discovered nothing either in the membranes, muscles, nerves, or viscera; and was hence led to believe that life was destroyed solely from the repetition and duration of these pains.”* This case induced a determination in our author to be more lenient in future. Its success will be seen in the following instances. An artillerist from the garrison of Fort de Bouc, was brought to the hospital at Martigues, with a violent pain in the left leg, and which was attributed to sleeping on the damp ground. During the space of eight months, a variety of antimonial preparations, together with mercurials and tonics when indicated, were administered, along with local remedies, but without any relief. The leg, from the repeated use of epispastics and cauteries, became thin, and rather shorter than the other; while from the low diet ordered, there was a general paleness and lankness of the system. Under these circumstances, Foderé could not refuse him a certificate as a real invalid. With the aid of a crutch, he dragged himself to Marseilles, where he obtained the promise of a discharge. He was ordered to return to the fort to await its arrival; but on his way thither, being too overjoyed, he was met by his commander, walking without his crutch. On being put in prison, he avowed the fraud.

Another case was that of a deserter, a Piedmontese, condemned to hard labour. He was conducted from prison to the workshops, marching on two crutches, as being paralytic in the lower part of the body; and from thence to the hospital, where he remained thirteen months. He supported during that time, with the greatest fortitude, the application of epispastics, moxa, and cupping; asked earnestly for the trial of new remedies, and excited the commiseration of all who saw him. At the end of the above period he was dismissed. In a short time he aban-

* Foderé, vol. 2, p. 471. Dr. James Johnson relates of a man who complained of inability to move his shoulder joint without much pain, and yet nothing could be seen externally for a month or six weeks, during which time he was excused from duty. At length the surgeon became suspicious, and finding that he still made the same complaint, reported him, and he was flogged as a skulker. Shortly, however, a deep-seated abscess was discovered in the shoulder joint, from which large quantities of pus were evacuated. Anchylosis of the joint followed. *Medico-Chirurgical Review*, vol. 4, p. 596. Probably the same case is given in the *Cyclopaedia of Practical Medicine*, vol. 2, p. 250.

doned the use of his crutches, and never employed them except when he expected to be observed.*

It is evident from these cases, that the difficulty of detection is often great. "The imposition is more frequently discovered by the inconsistencies and contradictions which a patient makes in the history of his complaint, than by diagnostic symptoms."† There is also often a great aversion to the proper modes of cure.‡

Internal pain, the existence of which it is difficult positively to deny, may be discovered to be feigned by examination during sleep. Thus, a soldier complained of severe pain in the abdomen, and screamed on the slightest touch to that part. He was bled, and afterwards an anodyne exhibited. About midnight he was visited by the medical officer, and found sound asleep. Pressure was made on the abdomen, and afterwards considerable kneading, before he awoke.§

Lumbago, where the body has been bent nearly double, has been repeatedly removed in a moment, by Baron Percy, holding the individual in an interesting conversation, whilst an assistant approached insidiously and pierced him behind with a long needle.

Chronic rheumatism, according to Dr. Cheyne, is distinguished by some disorder of the digestive organs, impaired appetite, a degree of pyrexia in the evening, yielding during the night to perspiration. There is also some emaciation, wasting of the muscles of the affected limbs, and puffiness of the joint. The feigned, on the contrary, do not lose their healthy appearance—have no fever—do not become worse with damp weather, but are complaining at all times—and even allege that they have entirely lost the use of the part affected, which seldom happens in real rheumatism.||

* Foderé, vol. ii, p. 437, 474.

† Marshall, p. 115.

‡ In the case of a deserter, who feigned rheumatism of the legs, and on whom, blisters, and moxa produced no effect, a cure was speedily effected by resorting to the prescription of Cadet De Vaux, viz. drinking large quantities of warm water. In a few days he declared himself well. Fallot, p. 37.

§ Dr. Coche relates the case of a French soldier who feigned lumbago. Six moxas were in succession applied during the ten months that he was in the hospital; and he only yielded when he saw the physician was about recommencing the use of that substance. *Annales d'Hygiène*, vol. iv, p. 446. Great caution is however necessary in these cases, lest we mistake a real disease, psoas abscess for example, for a feigned one.

|| Marshall, p. 118.

|| Cheyne, p. 170. A female presented herself, some years since, at Mr. Wardrop's

An interesting case of feigned *tic douloureux*, or neuralgia, is mentioned by Dr. A. T. Thomson in his Lectures. It occurred in the person of a young girl aged fifteen, who pretended to suffer great pain just back of the symphysis of the lower jaw. It produced her removal from school, the object she had in view. On a subsequent attack, Dr. Thomson resolved to try the effect of a strong mental impression; and understanding that she entertained great antipathy against a dog, informed her that the only remedy remaining was to rub the affected part over the back of the dog. It produced an immediate removal of the disease, and it continued absent for eighteen months. This case, according to Dr. Thomson, has been published in the medical journals as an illustration of the effect of mental impressions on the nervous system. Yet, eight years afterwards, when this female had become a wife and mother, she wrote to him, stating that the whole course of the disease had been a deception.*

It is easy to feign *hæmoptysis*, by pretending to cough, and then spitting out the blood which comes from pricking the gums; or it may be assumed by constantly holding some armenian bole or vermilion paint under the tongue, which tinges the saliva of a red colour. Periodical attacks of this disease are most commonly simulated; but it is difficult to counterfeit the accompanying marks of disease—such as the cough, flushed cheek, and even the *florid* and coagulated state of the blood. Orfila recommends that they should be made to spit without coughing, when the bloody saliva will be seen.

There are other persons who pretend to be afflicted with

Hospital of Surgery in London. She complained of most excruciating pain at the inner part of the right arm, in the situation of the biceps muscle; and this she said extended in every direction. The sensibility of the skin was such, that she could not bear to have it touched. The biceps was kept in a state of continual contraction, from the arm being constantly bent, and thus gave the appearance of a tumour. She spoke to Mr. Wardrop about amputation at the shoulder joint, and professed her willingness to undergo any thing in order to be rid of this complaint, under which she had laboured for five years. It was ascertained that she had already been in four hospitals on a similar story. There was no fever, and her health and appearance were good.—*Lancet*, vol. 12, p. 603.

Another illustration is given by Sir Benjamin Brodie, in the case of a young lady of distinction, who complained of pain in the knee of an hysterical character, but yet with such swelling, that it induced him to suppose that there must be some structural mischief. It was, however, found that a ligature had been tied around the thigh every night, in order to produce the effect. *Medico-Chirurgical Review*, vol. 29, p. 245.

* *London Medical and Surgical Journal*, vol. vii, p. 101.

hæmatemesis, or vomiting of blood; and for this purpose, drink the blood of some animal, or use some coloured liquid, and then throw it up in the presence of spectators. Sauvages, in his *Nosology*, mentions of a young lady, who, being unwilling to remain in a convent, had some blood of an ox brought to her, which she drank, and then vomited in the presence of her physician. As no deceit was suspected, he stated that she was really ill, and she thus obtained her liberty.* A similar case is related of a female, who accused a person of having maltreated her. She went to bed, and brought up large quantities of blood without any effort. She could however sing, cry, and put herself in a passion, without the disease recurring; and it ceased when she found that the deceit would prove useless.†

Bloody urine has been frequently feigned, either by adding blood to the excretion, or by using substances that have the quality of reddening it, such as the prickly pear (Indian fig),‡ the beet root, madder, &c. The Spaniards, on their discovery of America, ate largely of the Indian fig, and were much alarmed at the consequence. It only requires cautious examination to detect deceit. The individual should be made to urinate in the presence of the physician, and the vessel used should be carefully examined both before and during the process. The blood in real cases, when subjected to heat, furnishes a brown coagulum. The attendant symptoms, also, can hardly be mistaken.§ High coloured urine may be produced by various stimulants, such as wine, cantharides, &c. The experiment, however, is often hazardous, and foreign substances are hence more frequently used to give it the appearance of disease.||

* Mahon, vol. 1, p. 361.

† Metzger, p. 462. Hutchison mentions a case where a man had blood brought to him from the butcher's, and which he swallowed. (p. 178.) The slaves in the West Indies have been known to swallow their own blood. Scott, vol. 2, p. 143.

‡ Zacchias, lib. 3, tit. 2, p. 290.

§ Dr. Watson on *Hæmaturia*, in the *Medico-Chirurgical Review*, vol. 21, p. 491.

|| A boy at Bilson, (Staffordshire,) A. D. 1617, accused a woman of having bewitched him, and succeeded so well in feigning convulsions, etc. that she was tried and condemned to die. Dr. Morton, the bishop of the diocese, suspected imposture, and caused him to be confined and watched. He grew apparently worse, and the urine which he openly voided was black. The good bishop almost despaired of saving the life of the female, in consequence of this dangerous situation of the boy. A vigilant spy, however, detected him in dipping a small piece of cotton in an ink bottle placed at the side of his bed. This he put inside of the prepuce, in order to give the urine its colour when he excreted in public. *Memoirs of Literature*, vol. 4, p. 357.

Hæmorrhoids have been imitated, like other hæmorrhagic complaints. So also has *menstruation*, by staining the clothes and body with borrowed blood. Baron Percy says that hæmorrhoidal tumours have been very artfully constructed, by means of small bladders inflated and tinged with blood, and attached to a substance introduced into the rectum.*

Jaundice, when real, is known by the discoloration of the adnata, and of the urine. Clay coloured stools are also another indication; yet it is stated that individuals in France have imitated these to perfection, by taking daily a small quantity of muriatic acid. There are several substances, as curcuma or rhubarb, which, on being taken internally, produce a yellowness of the skin; but in such cases it is proper to recollect that real jaundice is frequently accompanied with vomiting, pain and sleeplessness. The most unequivocal symptom, and therefore the most to be relied on, is the colour of the adnata. If yellow, jaundice is present, originating either from disease or some artificial cause. A French conscript, however, always put snuff in his eyes before the surgeon's visit, to prevent their examination.†

Paleness of the Skin, on the other hand, has been caused by burning sulphur, by the use of digitalis—the abuse of emetics and purgatives; but watchfulness, and preventing their use, check the effects. The general state of the system does not correspond with the appearance.‡

Cachexia and *great weakness* are also often feigned, by using substances to make the face appear pale and livid. In these instances, inquire whether there is a loss of appetite, or of strength, or swelling of the legs. Examine also the pulse and the skin, whether the first be strong, and the latter hot.§

* Scott, vol. 2, p. 143.

† Percy quoted by Scott, &c. "In jaundice, the urine colours linen dipped in it. This is observed in no other disease." *Quarterly Journal of Foreign Medicine and Surgery*, vol. 4, p. 340.

‡ Orfila, *Leçons*, vol. i. p. 422.

§ A very curious work was published at New Haven in 1817, under the title of "*The Mysterious Stranger, or Memoirs of Henry More Smith*." It purports to be written by the Sheriff of King's county, New Brunswick; and I have repeatedly understood that there is no doubt of the authenticity of all the material facts. The

Diarrhœa and *Dysentery*. The former of these has been excited, in naval hospitals, by a mixture of vinegar and burnt cork; or a solution of sulphate of iron, obtained from the shoemakers, to whom it is furnished for blackening leather. Suppositories of soap or other irritating substances have been introduced into the rectum, to imitate the mucous discharges in dysentery; and with such persons, of course it is not difficult to procure the addition of blood. The stools have been broken down with their own urine. It requires watchfulness to detect these, and particularly they should be obliged to use a night chair. Many fine young men are said to have lost their lives in consequence of the use of the above substances.*

Involuntary stools. If these be solid, and the sphincter contracts on the finger, opium and solid food should be given, and a careful watch preserved. Such individuals are generally subjects for a court-martial. On one of these, (who also pretended sciatica and loss of the use of his lower extremities,) in the General Hospital at Lisbon, it was determined to apply the actual cautery. He was laid on his face, and held by three men. When the surgeon applied the red hot spatula to his hip, he *kicked* down one of the men who held him, and declared that he had been *shamming*.†

Vomiting. Some persons possess the power of expelling the contents of the stomach by pressure on the abdomen; others by swallowing air. It appears that nature or habit has given this to a few individuals. In many, however, frequent vomiting is a

hero of the story was a most accomplished villain. While in the prison at Kingston (New Brunswick,) he began to spit blood, had a violent cough and fever, and gradually wasted away, so that those who visited him supposed that his death was rapidly approaching. This continued for a fortnight, and his weakness was so great that he had to be lifted up in order to take medicine or nutriment. A turnkey unfortunately, however, left the door of the prison open for a few moments, in order to warm a brick for his cold extremities: On his return, *Smith had disappeared*. After many adventures and hair-breadth escapes, he is now a prisoner in the Newgate of Connecticut. There also he has feigned cachexia, hæmoptysis, and epilepsy, but with no success. He confessed that he pretended to raise blood by pounding a brick into powder, putting it in a small rag, and chewing it in his mouth. He contrived to vary his pulse by striking his elbows; and said he had *taken the flesh off his body in ten days, by sucking a copper cent in his mouth all night, and swallowing the saliva*.

* Hutchison, p. 181. Cheyne, p. 171.

† Cheyne, p. 147.

symptom of organic disease. Dr. Hutchison had a case in the Baltic, where it occurred so frequently as to become alarming. It was soon observed, however, that the vomiting was periodical, occurring when the physician paid his morning or evening visit; and in the interval, the patient ate his usual allowance of food, without any injurious effect. He was watched, and it was found that he made pressure on the region of the stomach with his hands, applied under the bedclothes. Whenever these were secured, the vomiting ceased.*

Dr. Cheyne remarks that the vomiting of *undigested* food is suspicious, and particularly advises that the case should be watched, to avoid mistakes. The stomach may be diseased. The absence of emaciation, and the continuance of a good appetite, are, however, circumstances indicating a healthy state of that organ.† To vomiting, some, according to Orfila, have added the complaint of *difficult deglutition*.

Apoplexy will only be feigned by those who hope for immediate escape from some impending punishment. From the nature of the disease, it cannot be long dissembled. If it be necessary to ascertain the truth at the first moment of the attack, powerful remedies, such indeed as are indicated in the real disease, should be employed. Zacchias observes that feigned apoplectics cannot resist the action of sternutatories.

In *vertigo* and *headache*, the malingerers generally overact. The giddiness is too violent, and the state of the stomach is not noticed. The pulse and the eye should be particularly examined: The former is slow and irregular, and the latter inexpressive.‡

Paralysis, in many respects, requires the same treatment as rheumatism. It is frequently feigned to extend to the superior or inferior extremities; in other instances, a single limb only is stated to be affected by it. This last is a rare occurrence; and

* Hutchison, p. 168.

† Cheyne, p. 167. A remarkable case of voluntary vomiting occurred some years since in this country, in a distinguished public individual. I forbear relating any of the particulars, lest I might unwittingly trench on the sacred privacy of domestic affections and sorrows. "Non sibi, sed patriæ vixit."

‡ Cheyne, p. 150.

the existence of the disease is to be doubted, if the general health be otherwise good.

Œdema of an extremity, in these cases, is sometimes excited by the continued use of ligatures. Among the remedies most efficient, are electricity, and the actual cautery. Dr. Blatchford gave a pretended paralytic in the New York State Prison, and whose case resisted every description of medicine, a severe electric shock. He started up, ran into the hall, and asked for his dismissal from the hospital. Where powerful means like these have failed, finesse or accident has succeeded in developing the fraud. Dr. Davies, at Chatham, (England,) knocked gently, at the dusk of the evening, on the window of one who could not move, and had lain in bed for a month. On calling him gently by name, he was at the window in an instant.*

Dr. Hutchison gave to one, who said he had a paralysis of the right arm, fifty drops of laudanum in his tea. When sound asleep, the doctor went into his apartment, and tickled his right ear with a feather, when instantly the lame hand was raised. A repetition of this, caused more active exertion. In another instance, the right hand was said to be powerless. The patient was brought before a board of medical officers, for the purpose of being invalided if found diseased. It was winter, and the surgeon proposed that the hand, in its relaxed and useless state, might be placed over the edge of the table round which they were sitting, while assistants should keep the arm and shoulder firmly fixed. In this situation, a red hot poker was gradually brought under the hand. As it came nearer and nearer, the hand gradually rose to the full extent of the powers of the extensor muscles. A half-witted fellow brought out another, by saying that he had seen him use his arms as well as any one.†

A most obstinate case, however, according to Mr. Marshall, was that of a private, who for two years endured every thing that medical skill and suspicion could suggest. His complaint was paralysis of the lower extremities. He was finally sent home from the Mediterranean, to be invalided. While in the harbour, an alarm of fire was given on board ship. All hurried to the boat alongside, and on reaching the quay, the passengers were

* Scott, vol. 2, p. 134,

† Hutchison, p. 164.

mustered. It was found that the invalid had saved not only himself, but his trunk and clothes.*

In these and similar cases, it is remarkable how parts of the body can be kept for so long a time (two or three years) in a state of inactivity, with hardly any diminution of muscular power. Dr. Cheyne relates some laughable instances of agility immediately consequent on successful deception. When the malingerers were sure of their discharge, they threw their crutches before them, and disappeared in a moment.†

In only one case (says Mr. Marshall) has he seen palsy of the upper eyelid attempted; and here the muscular resistance to every effort to raise it, showed the deception.

It is remarkable that a disease so much dreaded by the real sufferer as *epilepsy*, should be so often feigned; yet this is really the case, and the cause probably is, the affright and pity that may be inspired; or else the short exhibition of disease that is necessary, leaving the patient to act as he pleases during the interval. In all suspicious cases, it is proper to notice whether the sick person is suddenly affected—whether the face is livid, the pupil fixed, the lips pale, the mouth distorted and frothy, and the pulse altered.‡ The physician ought also to observe whether

* Marshall, p. 124. In another long protracted case, where the individual asserted that he had lost the power of using his lower extremities, and every attempt at detection had failed, the fraud was discovered by rubbing cowhage (*Dolichos pruriens*) on the soles of the feet at bedtime. He walked and groaned all night, and the next morning reported himself fit for duty. Page 104.

† I cannot forbear adding the following American case, extracted from a New Jersey newspaper. A dexterous deception was recently practised upon the court of sessions at Hackensack. A fellow who had been a long while in prison awaiting trial on an indictment for perjury, a few days prior to the time appointed, had a severe paralytic stroke, which rendered one side entirely powerless. In this helpless condition, he was carried from the prison into court on a bed. The spectacle of an infirm fellow-being, trembling into the grave, on a trial for perjury, had a visible influence upon the sympathies of court and jury. The evidence, however, was so unequivocal, that the jury convicted him. During the progress of the trial, he became so faint that a recess was granted, to enable him to be reconveyed to his apartment in the prison for revival, the prosecuting attorney kindly lending assistance. The court, in view of the prospect of his being speedily called to a higher tribunal, instead of sentencing him to the state prison, simply imposed a fine of five dollars, which his brother, who manifested the most fraternal solicitude, paid, and conveyed him away on a bed in a wagon. The next day, the prosecuting attorney encountered the fellow at the foot of Courtlandt street in New York, who told him laughingly that he had recovered; and then dropping his arm and contracting his leg, in true paralytic style, hopped off, leaving the learned counsel to his own reflections!

‡ Fallot remarks (p. 28) that in the real epileptic, the pulse is often small and hard, and sometimes slow in the midst of the most horrid convulsions, while in the dissembler, it necessarily, from his violent efforts, is always full and quick. The

sleep follows the paroxysm, and also if the patient complains of dulness of sensation, vertigo, and great weakness. All or most of these symptoms accompany real epilepsy. But the surest sign of this disease is a loss of feeling, so that sternutatories, and even the actual cautery, produce no effect during the paroxysm. This immediately gives us a mode of detecting artifice. An artillerist at Martigues had acquired, from frequent practice, such skill in feigning this disease as almost to deceive Foderé, and this indeed would have been the case had he been also able to resist the application of fire. This always recovered him, though he lay apparently without sense, his eyes starting from their orbits, and his mouth foaming. He afterwards confessed, that he never counterfeited a paroxysm without feeling for several days a violent pain in the head.*

De Haen was consulted by a mother, whose daughter, after being cured of deafness, became epileptic. He directed her to be brought to the hospital at Vienna, where he attended. The fit, which at first did not occur more than once or twice a day, now recurred every hour. It resembled a real one, as the hands were violently clenched, and the eyes disordered; but he suspected deception, for the following reasons: She did not open her eyes during the paroxysm with a wink, but in the natural manner; her pulse was natural; when the curtains were drawn, the pupil of the eye was dilated, and when opened, it was contracted, and this last occurred very violently when a candle was presented. Convinced that the disorder was pretended, he ordered her to be taken out of bed, and directed the attendants to keep her in an erect posture. If she fell, they were to chastise her severely. A cure was thus effected, and she confessed that both the deafness and epilepsy were feigned, to avoid going to service. In another case, a female, aged twenty, was confined in prison for a murder, who had on her the marks of three suc-

heart, however, beats rapidly and violently in real cases, and this is with great difficulty imitated.

* Foderé, vol. 2, p. 464. "A case is related of a country boy, who feigned epilepsy to avoid work. A surgeon was called, who suspected the deceit, and observed to one of the bystanders, that if it was a true fit, as he thought it was, the patient would turn round on his face and bite the grass; this he did, and so betrayed himself. On occasions of this kind, it is proper to examine the mouth for soap, which is easily done by pressing the cheeks against the grinder teeth. I once saw a pseudo-epileptic in Edinburgh, recovered by the simple expedient of calling a police officer." DUNLOP.

cessive burnings, which she resisted without confessing the deceit. De Haen, and many others, saw her imitate a paroxysm of epilepsy with such horrible accuracy, that the feigned was supposed to be real, until in the midst of it, being ordered to rise, she got up and walked away. In such an instance, our author recommends the remedy used at Paris. A beggar there often fell into fits in the street. A bed of straw, through compassion, was prepared, on which he might be laid to prevent injury to himself. When next attacked, he was laid on it, and the four corners set on fire. He sprang up and fled.*

Various substances have been successfully applied to detect the imposition, as snuff blown into the nostrils, (and Dr. Hutchison remarks that he had tried this on the real without any effect;) flannel dipped into hot water, and applied to the side; a drop of alcohol poured into the eye, and pouring a small stream of water on the face. Aloes and salt insinuated into the mouth, have broken up a feigned paroxysm.†

It is denied that the peculiar appearance of the eye is always present in epileptics: It has been said to contract.‡ At all events, it is frequently difficult to ascertain its state correctly, and we must attend to other circumstances. If the hands of the real epileptic be forced open, they remain expanded; but the feigned will immediately close them again.§ The contractions also of various parts of the body always come on simultaneously in the real; nor is there any regular period in the return of the fits. Thus Vaidy, a French surgeon, detected a case by stating to the individual that the real disease always came on in the morning. He swallowed the bait, and the attack always

* De Haen's *Ratio Medendi*, vol. 2, p. 56, &c. The following case should not be omitted: "Maturam virginem procorum penuria torquet, angitque. Forte casu audit a garrientibus inter sese matronis epilepsiam matrimonio nonnunquam curari. Ergo eam artificiose fingere discit, quo cogat parentes se viro jungere." (Ibid. p. 55.) The following is a case in point, with respect to the *aura epileptica*. Sauvages was called to visit a female, who imitated the fit to perfection. He was, however, suspicious concerning its reality, and therefore inquired whether, on the access of the disease, she felt pain extending from her arm to her shoulder, and from thence to the opposite thigh? She replied that she did, and thus led to her detection. (Belloc, p. 243.) There are also some instructive cases of feigned epilepsy in Blatchford's Dissertation, already referred to.

† In a late work of Mr. Marshall, which I have not been able to procure, it is stated that a few drops of croton oil were introduced through an opening left by the loss of two teeth, and in a few minutes the pretended epileptic started on his feet, and ran to the water closet. *Medico-Chirurgical Review*, vol. 21, p. 263.

‡ *Medico-Chirurgical Review*, vol. 4, p. 598.

§ Marc. Orfila's *Leçons*, vol. 1, p. 414.

occurred before noon.* It is also asserted, that in the real, warmth and perspiration are present during the fit; while in the feigned, they succeed it.†

One fact should be kept in mind respecting this disease: The real epileptic is desirous of concealing his situation, and attaches to it a kind of false shame; while the feigned talks about the disease, and takes no precaution to avoid publicity.‡

Convulsions, when feigned, do not present that stiffness of the muscles, or that resistance and rapidity of action, which appear in the real. The treatment must be similar to that of epilepsy. Twenty years ago, says Foderé, I proved, by the aid of fire and force applied to the antagonist muscles, that a woman, who had imposed on a good curate in the Alps, was an impostor. She was supposed to be possessed—fell down apparently without sense, and made frightful contortions. She could not, however, withstand the above tests, and rose up, to her great confusion, and the astonishment of the spectators.§ In feigned cases, the muscles do not stiffen and contract as in real ones. Hence continued action of the antagonist ones will develop the fraud.

The following is a ludicrous feigned case of a minor form of convulsive action, confined to a particular part. A seaman pretended to have a convulsive motion of the muscles about the neck and upper part of the trunk, so as to produce an involuntary and incessant shrugging of the shoulders. The surgeon under pretence of being very desirous to ascertain how often the alternate elevation and depression of the scapula occurred in the day, set some of his comrades to watch him; one of whom made a mark upon a board with a piece of chalk, for every shrug of the impostor. He held out nearly twenty-four hours, and then exclaiming, “You have done me!” offered to return to duty.||

* Marshall, p. 178.

† Dictionnaire des Sciences Médicales, Art. Epilepsie simulée, (by Marc.) In a real and most severe case of epilepsy occurring in a criminal at Paris, Varelaud, the medical examiner, found the teeth worn at every point where the upper had come in contact with the lower jaw. The lower incisors, in particular, were worn extremely at their fronts; and yet the individual was only twenty-two years of age. The appearance of the teeth is hence worthy of examination in all doubtful cases. *Annales D'Hygiène*, vol. 3, p. 429.

‡ Dumas of Montpellier, in his work on the *Physiognomy peculiar to some chronic diseases*, mentions, that in constitutional epileptics, the facial angle is always under 80°, and recedes from that to 70°. He found this to be the case in many instances, at the hospital in Toulouse. (*London Medical and Physical Journal*, vol. 27, p. 38.)

§ Foderé, vol. 2, p. 468.

|| *Edinburgh Medical and Surgical Journal*, vol. 30, p. 179. A somewhat similar case occurred to Dr. Elliotson. *Lancet*, N. S. vol. 7, p. 273.

Chorea is sometimes attempted by our mendicants. It would tend to discover the reality of the disease, if we applied the suggestion of Darwin—forcing them to make perpetual and repeated efforts to move the limb in the designed direction. They should be secretly watched.

Catalepsy would most probably seem to be a form of hysteria: At least, this will best explain most of the cases now occurring.* Its peculiar characteristics are, that the patient becomes suddenly motionless, while the joints remain flexible, and yet external objects make no impression. In so mysterious a disease, if there be any cause for suspicion, the remedies already indicated should be applied. Dr. Gooch quotes the following feigned case from Mr. Abernethy's Hunterian Oration:

“A patient in the hospital feigned to be afflicted with catalepsy; in which disorder it is said a person loses all consciousness and volition, yet remains in the very attitude in which they were suddenly seized with this temporary suspension of the intellectual faculties. Mr. John Hunter began to comment before the surrounding students on the strangeness of the latter circumstance; and as the man stood with his hand a little elevated and extended, he said, ‘You see, gentlemen, that the hand is supported merely in consequence of the muscles persevering in that action to which volition had excited them prior to the cataleptic seizure. I wonder,’ continued he, ‘what additional weight they would support;’ and so saying, he slipped the noose of a cord round the wrist, and hung to the other end a small weight, which produced no alteration in the position of the hand. Then, after a short time, with a pair of scissors, he imperceptibly snipped the cord. The weight fell to the ground, and the hand was suddenly raised in the air, by the increased effort which volition had excit-

* The following references to some cases may assist in forming an opinion :

Memoirs of Literature, vol. 3, p. 100, 194. Cases by Deidier.

Medical Commentaries, vol. 10, p. 242.

American Medical and Philosophical Register, vol. 1, p. 47. Case by Dr. Stearns.

Cyclopedia of Practical Medicine, Art. Catalepsy, by Dr. Joy.

Edinburgh Medical and Surgical Journal, vol. 39, p. 409.

Medico-Chirurgical Review, vol. 8, p. 201.

Lancet N. S. vol. 6, p. 277. A case treated by Dr. Duncan, junior, in the Edinburgh Royal Infirmary.

Copland's Dictionary of Medicine, Art. Catalepsy.

Lancet, N. S. vol. 11, p. 532. Vol. 16, p. 129, 443. Vol. 17, p. 23. Cases by Mr. G. Burnett, Mr. Ellis, Dr. Hannay, and Dr. Kelso.

ed for the support of the increased weight. Thus was it manifested that the man possessed consciousness and volition, and the imposture stood revealed.”*

Feigned syncope or hysteria cannot resist the action of sternutatories. In the former, it is difficult to dissemble a small, feeble and languishing pulse, an almost suppressed respiration, cold sweats, coldness of the extremities and paleness of the countenance. Cases are however mentioned, where individuals have possessed the power of suspending, or at least moderating the action of the heart; as, on the contrary, some have been able to increase it at will. Dr. Cleghorn of Glasgow mentions in his lectures, of a person whom he knew, who could feign death, and had so completely the power of moderating the action of the heart, that its pulsation could not be felt. This man, however, some years after, died suddenly.†

Somnolency. There are several cases on record, of the long continuance of this state; some of which were feigned, and others, to say the least, doubtful in their nature. Dr. G. Smith makes mention of a soldier named Drake, who assumed an appearance of total insensibility, and resisted for months every sort of treatment—even the shower bath and electricity; but on a proposal being uttered in his hearing, to apply red hot iron, his pulse rose, and an amendment shortly took place.‡

The case of Phineas Adams, which lately occurred in England, shows to what individuals will submit, in order to escape punishment. He was a soldier in the Somerset militia, aged eighteen years, and confined in gaol for desertion. From the 26th of April to the 8th of July 1811, he lay in a state of insensibility, resisting every remedy, such as thrusting snuff up the nostrils,

* Transactions of the London College of Physicians, vol. 6, p. 272.

† Paris's Medical Jurisprudence, vol. 1, p. 360. See also Male, p. 267; Hennen, p. 466.

‡ Smith, p. 471. Edinburgh Annual Register, vol. 9, part 2, p. 49. Dr. James Johnson says that he detected the imposture of Drake on the day he was landed at Portsmouth, by attempting to introduce a piece of aloes into his mouth: he felt the resistance of the muscles. Medico-Chirurgical Review, vol. 4, p. 598.

“So well did this man acquit himself, that after he was removed to the York Hospital, many of the medical men were then, and still are of opinion, that the disease was real. I attended him at Hillsea, along with Dr. Hennen and Dr. Knox, now of Edinburgh, who had the immediate charge of him; and from every thing I saw, and many experiments I made, I have not the slightest doubt that he was an impostor.” DUNLOP.

electric shocks, powerful medicines, &c. When any of his limbs were raised, they fell with the leaden weight of total inanimation. His eyes were closed, and his countenance extremely pale; but his respiration continued free, and his pulse was of a healthy tone. The sustenance he received was eggs diluted with wine, and occasionally tea, which he sucked in through his teeth, as all attempts to open his mouth were fruitless. Pins were thrust under his finger nails to excite sensation, but in vain. It was conjectured that the present illness might be owing to a fall; and a proposal was consequently made by the surgeon to perform the operation of scalping, in order to ascertain whether there was not a depression of the brain. The operation was described by him to the parents at the bedside of their son, and it was performed; the incisions were made, the scalp drawn up, and the head examined. During all this time he manifested no audible sign of pain or sensibility, except when the instrument with which the head was scraped, was applied. He then, but only once, uttered a groan. As no beneficial result appeared, and as the case seemed hopeless, a discharge was obtained, and he was taken to the house of his father. The next day he was seen sitting at the door, talking to his parent; and the day after, was observed at two miles from home, cutting spars, carrying reeds up a ladder, and assisting his father in thatching a rick.*

Mr. Dease states a case where a female servant, on receiving a slight injury from her master, ran to the door—said she had been almost murdered, and to corroborate it, fell into a fit. She was carried to a hospital, and lay for ten or twelve days without showing the least sign of sense or recollection. Mr. Dease, on being called into consultation, soon detected the imposture, and the woman almost immediately disappeared: But popular indignation had nearly ruined the individual in property, and consigned him for a time to a jail.

Even *hydrophobia* has been attempted to be feigned both in England and France, but with little success.† And I have seen it stated in an extract from the United Service Journal, that a beggar once attempted *tetanus* at St. Bartholomew's Hospital.

* Edinburgh Annual Register, vol. 4, part 2, p. 159. A remarkable case, about which there appears to be some doubt, is related by Dr. Hennen, p. 458. The *ap-proach* (not the touch) of a hot iron, caused abundant marks of sensibility.

† Orfila, Leçons, vol. 1, p. 425. Medico-Chirurgical Review, vol. 9, p. 261.

Mr. Abernethy, however, suspected the imposition; and turning to one of the surgeons, as if in consultation, remarked what a remarkable symptom, in the last stage of this disease, incessant winking of the eyes was. The patient immediately began to wink with both his eyes.

Nostalgia, or *maladie du pays*, is a disease common in military hospitals. This mental affection, if carried to excess, soon produces a physical one, and a mixed state is produced, in which all the marks of melancholy and hypochondriasis are visible, Young men are more subject to it than persons advanced in life, villagers more than citizens; and among nations, it is found to prevail most in the Swiss, the Savoyards, the inhabitants of the Pyrenees, the Flemings, &c. Besides the above considerations, and that alteration of countenance which it is impossible to feign, it may be added, that "pretenders generally express a great desire to revisit their native country, whilst those who are really diseased, are taciturn, express themselves obscurely on the subject of their malady, dare not make an avowal, and are little affected by the consolations which hope or promises offer to them."* The healthy colour, the strength and regularity of the pulse, and the aversion to low diet and setons, also serve to distinguish the one from the other.†

It has been attempted to imitate *scrofula*, by exciting ulcers in the neck and lips with euphorbium or other acrid substances. Cicatrices from these have been exhibited. The scrofulous ulcer cannot, however, be imitated. *Scurvy* also was feigned by the French conscripts; but they could not advance farther than a bleeding state of the gums, induced by potash, &c.‡ Various *cutaneous affections*, as *tinea capitis*, *pompholyx*, &c. have been produced by the application of nitric acid or blisters.

* Foderé, vol. 2, p. 463.

† Orfila, Leçons, vol. 1, p. 412.

"The only two cases of nostalgia I ever happened to meet with, do not bear out the general remark, that an inhabitant of a hill country, or a village, exclusively, is liable to this disease. The first was a recruit, a country lad, from the fens of Lincolnshire, who died under my charge, on his passage to Canada in 1813; and the other, a London pickpocket, whom I saw this year (1824) in the hulks at Sheerness." DUNLOP.

‡ Orfila, Leçons, vol. 1, p. 426.

Incontinence of urine. Two deserters were brought to the hospital at Martigues, on account of this disease. Foderé was the attending physician, and applied epispastics to the perinæum—a remedy which he in previous cases had found useful—but without success. They were discharged; but it was shortly discovered that they had feigned the disease. The consequence was an epidemic incontinence of urine among their companions that remained. This awakened the suspicion of our author; and above all surprised that his remedy produced no effect in any case, he ordered that the penis of every patient should be tied, and on the knot a seal placed, which none but the gendarme who guarded them should have power to break, at such times as they wished to urinate. He charged the guard to visit them from time to time, to observe whether the penis was inflated, and also whether the urine was not discharged *guttatim*. He did this from having observed, that in real incontinence of urine, the penis becomes enlarged, so as to render it necessary to remove the ligature in a very short time. The expedient succeeded; it was removed only at the ordinary period, and in twenty-four hours the epidemic vanished.*

Dr. Hennen observes that this disease is almost always detected by giving a full dose of opium at night, without the knowledge of the individual, and introducing the catheter during sleep; or by taking him by surprise during the day, and introducing the same instrument, when it will be found that the urine has not drained off *guttatim* as it was secreted, but that the bladder possesses the power of retention.† Dr. Comyns cured its epidemic appearance in an Irish regiment, by prescribing a cold bath every morning and evening in Lough Neagh.‡ In ordinary practice, it is a very rare disease. The prepuce and glans penis are found to be pale from its continuance, and the clothes exhale an ammoniacal odour.

* Foderé, vol. 2, p. 481.

† Hennen's Principles of Military Surgery, p. 455. In a very interesting inaugural dissertation on feigned diseases, published by Dr. Blatchford in 1817, it is stated that *suppression of urine* was a frequent disease among the female convicts at the New York State Prison. The author, who was the resident physician there for some time, relates two cases, in which the frequent use of the catheter obviated all the evil effects that a *voluntary* suppression might have produced, and also indicated when the complaints of pain and distress were groundless. (Pages 71 and 74.) By a reference to old registers, he found that this was a common complaint immediately after the initiation of every "Resident Physician."

‡ Cheyne, p. 150.

Gonorrhœa has been imitated by soldiers, with caustics applied to the prepuce.* *Stricture* also would seem to be a complaint with naval officers who wish to leave their ship. Dr. Hutchison detected several, by engaging them in conversation, while he succeeded in introducing the bougie.

Chemistry supplies us with the means of ascertaining deceit when the *excretion of calculi* is feigned. It teaches the characters which designate their animal origin.† A physician was consulted by the friends of a young lady of high respectability, concerning a very painful disease to which she was subjected. She was said to be frequently ill, and during the attack to void, with agonizing pain, concretions in her urine. A certain number of these being discharged, she felt relief. A parcel of these urinary concretions was handed to a physician, who instituted experiments on them, and found, what indeed was obvious on inspection, that they were nothing but common sand and pebble stones. Of these, it was asserted, she had excreted not less than several pint measures in the course of two or three years. No motives were assigned for this lady's extraordinary conduct.‡

Mr. James Wilson mentions a case where pieces of slate had been introduced into the urethra of a boy, and a request was then made to perform the operation of lithotomy. The object, he imagines, was to excite commiseration, and thus obtain money, or possibly to extort it from the surgeon, had he seriously attempted any operation.§

Dr. Elliotson speaks of a woman, who showed sundry concre-

* Dr. De Brus. *American Journal of Medical Sciences*, vol. 1, p. 378.

† "Dr. Thomson of Edinburgh, while a young man, as a chemical experiment, examined some of the sand which a woman alleged she had passed from her bladder, and found micaceous particles in it, which put an end to the imposture. A poor woman in the Glasgow Infirmary, who was less of a geologist than her compeer, used pounded coals for a similar purpose."—DUNLOP.

‡ *Edinburgh Medical and Surgical Journal*, vol. 7, p. 488.

§ Wilson's *Lectures on the Urinary and Genital Organs*, p. 183. There are many similar cases: One by Dr. Livingstone of Aberdeen, where stones were found sticking in the vagina. *Medical Commentaries*, vol. 4, p. 452.—By Dr. Thomas Thomson, where he detected micaceous particles in the alleged gravel. *Annals of Philosophy*, vol. 4, p. 76.—By Sir Astley Cooper, of Mr. Cline, who was about operating on a female, but discovered that the body had not the hardness of stone, and finally drew from the vagina several pieces of coal. *Lectures*, vol. 2, p. 129.—By Dr. Elliotson, *Lancet*, N. S. vol. 10, p. 135.—Pebbles have for a time been passed off as gallstones. *Medico-Chirurgical Review*, vol. 22, p. 231. By Dr. F. H. Ramsbotham, of a female pretending to discharge pieces of common chalk by the urethra. *London Medical Gazette* 16. 615.

tions which she stated had been passed with the urine, and gave her great pain. They were found to be solely carbonate of lime, (a rare constituent of urinary calculi;) and on being shown to Dr. Wollaston, he ascertained, by a lens, that they were the backbones of sprats.* Soldiers have frequently taken scrapings from the wall, or a stone, and mixed it with their urine.

"It is curious to observe," says Foderé, "how many young men have, during the last twenty years, worn convex glasses, in order to acquire *myopia* or *near-sightedness*; which, however, is not the certain consequence, but more commonly this practice leaves a weakened and defective sight, differing from it, and also from that which is the effect of old age. It is not from an inspection of the eye, nor from the account of the individual, that we can judge concerning the reality of the complaint; but it may be ascertained by presenting an open book, and applying the leaf close to the nose, or by putting on glasses proper for near-sighted persons. If the individual cannot read the book distinctly when placed thus, or when the above glasses are used, we may feel confident that his disease is feigned."† This mode of examination should be strictly adhered to; since, as far as my observation has extended, no complaint is more frequently urged by those who wish to avoid military duty, than near-sightedness.

Ophthalmia has often been artificially excited by the application of various stimulant remedies. It is, however, detected by the rapidity of its progress. *It arrives at its acme within a few hours after the application of the acrid substance.* Some information may also be derived from noticing which eye is affected. A few years since, when an extensive system of deception prevailed in the British 28th regiment of foot, Dr. Vetch observed that the counterfeit inflammation was almost solely confined to

* London Medical Gazette, vol. 7, p. 239. Siliceous matter, in very minute quantities, appears to have been found in gravel by Dr. Venables. Journal of the Royal Institution, vol. 2, p. 256.—The most remarkable case, however, is that given in a recent number of the Edinburgh Medical and Surgical Journal, (vol. 41, p. 127,) by Dr. Hill of Greenock. Several minute calculi were passed, which Dr. Wm. Gregory ascertained by chemical experiment to consist of silica solely.

† Foderé, vol. 2, p. 480. "There was a young French Surgeon in Edinburgh in the year 1819, who was naturally short-sighted, but not sufficiently so to excuse him from military duty. He avoided the conscription, however, by habituating himself to read with a book close to his eyes," DUNLOP.

the right eye.* A left-handed man would probably inflict the injury on the left eye.†

No disease has been more extensively feigned than this, both in the English and French armies. Twelve per cent of the inefficient conscripts belonging to the department of the Seine, were rejected from this cause ;‡ and several hundred men, in various British regiments, have been afflicted at one time.§ The articles principally used have been salt, sulphate of copper, corrosive sublimate, cantharides, alum, tobacco juice, lime, and nitric acid.|| Sometimes the progress of the epidemic was stopped by removing numbers, in a state of nudity, to a new ward. They could not carry these articles with them. But the most efficient remedy appears to have been the alteration of the pension regulations. They ordained that no soldier should be discharged for the loss of one eye only. Dr. Hutchison found it necessary, in some instances, to put on the strait waistcoat, and thus prevent the hands from doing injury.

That species of *blindness* which originates from amaurosis, is strongly characterized by the dilated and fixed pupil. There are, however, cases in which the pupil retains some contractile power, although we know the sight to be lost. In such an instance, epispastics and setons are proper; and if suspicion exists, the patient should be watched, to see whether he does not avoid obstacles put in his way. If this be carefully pursued, the deceit is often detected. The following case, however, occurred to Mahon: A young conscript was sent to the corps blockading Luxemburg. Having passed the night at the advanced posts, he, on the next morning, declared himself blind, and was sent to the hospital. The surgeons used the most powerful remedies, and were convinced that the disease was feigned, as the pupil contracted perfectly. He assured them, however, that he could not see; thanked them for their care of him, and asked for the application of new remedies. He was sent to the superior medical officers at Thionville. They also were convinced that it was a fraud; but having learnt the course that had been pursued, they

* Edinburgh Medical and Surgical Journal, vol. 4, p. 158.

† Hennen, p. 465.

‡ Scott, p. 148.

§ Edinburgh Medical and Surgical Journal, vol. 38, p. 139. Scott, Cheyne, etc.

|| Cheyne, p. 130.

determined on a last trial. He was put on the bank of a river, and ordered to walk forward. He did so, and fell into the water; from which, however, he was immediately taken by two boatmen stationed for that purpose. Convinced of his blindness, but unable to explain the dilatation and contraction of the pupil, the surgeon gave him a discharge, but warned him, at the same time, that if his disease was feigned, it would prove of no avail, as it would sooner or later be ascertained that he was not blind. They offered him another, if he would confess the fraud. He hesitated at first; but being at length assured that they would keep their word, he took up a book and read.* “The proof in this case,” says Foderé, “would have been complete, if, instead of a river, he had been put on the edge of a precipice, where he might see that nothing could prevent his destruction—but *what if he had been really blind?*”

A dilated pupil and inactive iris, the common characteristics of amaurosis, have been produced by the application of the extract of belladonna or hyoscyamus to the skin around the eye; and above two hundred conscripts in France succeeded, by this means, in being declared amaurotic. Dr. Marshall has also seen these effects temporarily produced by infusing the leaf of the *Datura metel* into a man's food. The eye is, however, more or less red from local applications, and we should also remember that their effects are temporary.† But in real amaurosis, the dilatation seldom totally disappears.‡

Nyctalopia (night-blindness) was much feigned by the soldiers in the expedition to Egypt under Sir Ralph Abercrombie. It was difficult to detect it, as the disease in that country is epidemic. All inconvenience was, however, obviated by joining a blind man with a seeing one in the works; and when the sentries were doubled, a similar arrangement was made—hearing being often more important on an outpost than seeing.§

Pretended deafness may be detected by making a noise at a moment least expected. This excites a sensation which it is dif-

* Mahon, vol. 1, p. 360.

† Marshall, p. 112. The effects of henbane do not last, according to Orfila, beyond twenty-four hours; and those of belladonna, beyond six.

‡ Devergie, vol. 2, p. 914.

§ Cheyne, p. 146.

ficult to conceal. Acute persons will also always find some mode of ascertaining the truth. A deserter, condemned to labour on the canal at Arles, said he was deaf, and passed for such with his comrades and guards. Being brought before the inspector to be examined, he appeared such as he stated, until Foderé spoke to him in a low tone of voice, saying, "You cannot persuade me that you are deaf; but if you will confess the truth, you shall have your discharge." To the astonishment of all, he answered, "Very well; I am not deaf."* Again, a conscript stated that he was deaf. The general who visited for the purpose of examination, let fall a piece of silver behind him. The deaf person turned his head round towards the place from which the noise proceeded, and by this means was detected.†

"Who would believe," says Baron Percy, "that by exercise, some young men have so successfully affected deafness, that a fire of musquetry exploding suddenly at their side could not draw from them the least mark of fear or surprise?" "I knew one, however," he adds, "who betrayed himself at last before his judges, at the sound of a small piece of money designedly dropped on his foot, while it was whispered in his hearing, that he was surely going to be discharged."‡

Deafness cannot long be present, without producing a peculiar cast of countenance. It also, in real cases, comes on vastly slower than with the simulated.§

Some of the French conscripts excited diseases of the ear, and particularly fœtid discharges, by introducing blistering plasters, peas and other substances into it.

Those who pretend to be *deaf and dumb*, have a still more arduous part to play, and need an art and perseverance of which few are capable. Such who are really in that unhappy situation, acquire a physiognomy and certain gestures which it is difficult to assume, and which it is impossible to prepare for every examination that may be made. In reviewing the histories of those pretending deafness and dumbness, it has been found, says

* Foderé, vol. 2, p. 475.

† Belloc, p. 252.

‡ New York Medical Repository, vol. 17, p. 359.

§ "In the York Hospital, we had a soldier who feigned deafness so well, that firing a pistol at his ear produced no effect. We tried the experiment after he had been put to sleep by opium, and he started out of bed." DUNLOP.

Foderé, that women have been the most successful; and the sex fondest of talking, are the most capable of feigning dumbness.

The Abbé De L'Epée was deceived by a pretended deaf and dumb person, who feigned to be the son of Count De Solar. Sicard, however, his successor, was more fortunate in detecting the villany of another, whose ingenuity resisted, for four years, an infinite number of investigations made on him in France, Germany, Switzerland, Spain and Italy. This young man was named *Victor Foy*, and was from Luzarche, six leagues from Paris; but called himself *Victor Travanait*—travelling, as he said, in search of his father, but in reality to avoid military duty.

He was imprisoned in various countries, watched closely, and examined most rigidly, without being detected. So perfectly indeed had he accustomed himself to his part, that when he avowed the fraud, to use his own expression, he had unlearned how to hear. In Switzerland, he was tempted by a young and beautiful woman, who offered him her hand, but without effect. In the prison at Rochelle, the turnkey was ordered to sleep with him, to watch, and never to quit him. He was repeatedly awakened in a violent manner, but his fright was expressed by a plaintive noise, and in his dreams guttural sounds alone were heard; and the hundred prisoners, who were all ordered to detect him if possible, could discover nothing from which they could imagine deceit. At last the officer charged with the police of the prison of Rochelle, became satisfied, after many examinations, that he was really deaf and dumb, and declared this in the public journals, so as to obtain his liberty. Victor unhappily, at this period, went beyond his capacity. He stated himself in writing to be an *élève* of the Abbé Sicard. This ingenious and worthy individual denied the fact without seeing him, and proved it from the writing. "I cannot tell," said he in a letter to the counsellor of state, Real, "whether this person, confined at Rochelle, be really Victor Travanait, or not; but I can say positively that he was not born deaf and dumb." The reason which he assigned for this opinion, was, that he wrote from sound, while the deaf and dumb write only as they see. In his letters, he appeared so ignorant as to divide some words, and annex prepositions to others as if they were constituent parts. The following extract will serve as a specimen: "*Je jur de vandieux; ma mer et né en Nautriche; quhonduit (pour conduit;)*

essepaise (pour *espoir*;) *torre* (pour *tort*;) *ru S. Honoret*; *jai tas present* (pour *j'étais présent*;) *jean porte en core les marque* (pour *j'en porte encore les marques*.)" It will be observed, that in this letter, Victor uses *q* instead of *c*; and from this Sicard inferred that he had heard, and knew that the sound of these gutturals was similar. He concluded by stating his conviction that Victor was not born deaf, and of course was not dumb.

The criminal was now brought to the institution for the deaf and dumb at Paris, and placed before the black board. He was ordered to write answers to questions put to him by Sicard, which he did in so able a manner, and eluded the most embarrassing questions so ingeniously, that nothing but his orthography could yet be adduced against him. Sicard had taught his pupils to articulate sounds, and he had done this by showing them the words, as it were, by the apparent effects of touches on a musical instrument, and then pressing their arms more or less strongly. During this operation, he obtains at pleasure the hard or soft consonant, which serves as a sign for the required articulation. Victor, when put to this proof, instead of the syllable *pa*, pronounced only the vowel *a*, and never uttered the labial consonant, which all the deaf and dumb easily articulate. He was then put to the last test. When asked how he had been instructed, he answered by signs, and promised to explain by them such words as they might write on the black board, but could not do so. He was then placed among those who were really deaf and dumb, but understood nothing from them, nor could they comprehend him. Frightened at this detection, and still more so at the threat he had heard, that he would be confronted with the pastry cook, to whom he had been an apprentice, he at last took up a book and read.*

It is an observation of the author from whom I have taken this case, that it was Victor's folly alone which detected him. Had he not asserted that he was a pupil of Sicard, he might have escaped. But he was ignorant that all were educated alike, and of course should express their ideas in a similar manner.†

If the tongue retains its muscular power and is otherwise

* Foderé, vol. 2. p. 478-9. When Mr. Clerc, the distinguished teacher of the deaf and dumb at Hartford, visited Albany, he informed me that he was one of the pupils who assisted in detecting Victor.

† A case of pretended deafness and dumbness in this country, by a person named

healthy, and deafness is not present, the person pretending to be dumb is doubtless an impostor. Orfila recommends that such should be made to sneeze and the sonorousness of the sound noticed.

Stuttering and *stammering*, if the organs of speech were sound, were treated by the French surgeons on the starvation plan, until the subjects of it called for their food without any hesitation in articulating.*

Fallot advises that they be made to repeat any thing which they know by heart, as their prayers for example, or that they be requested to sing. The real sufferer will go through this without stammering; the person feigning stutters on with many grimaces and distortions of the countenance.†

The number and variety of feigned diseases connected with *tumours* and *enlargements*, are really remarkable. The following can hardly be characterized, but it shows how much we ought to distrust that affectation of modesty which will not permit a complete investigation. A young female at Strasburg, from the enlargement of her abdomen, had led the public to doubt the purity of her character. The distension continued so long as to dissipate the suspicion; and for thirty-nine years she continued to increase in bulk, and excited the commiseration and charity of all who saw her, in such a manner as to lead a highly comfortable life. Her case excited the attention of the physicians and surgeons; and they waited with some impatience, until her death should develop the nature of this extraordinary disease. No tumour was found; but in her wardrobe was a sack or cushion weighing nineteen pounds, and so made as to fit the shape of the abdomen. This female would never allow a medical man to examine the seat of her pretended disease.‡

James Stilwell, was detected by Mr. Clerc in 1822. The imposture in this instance was, however, more clumsy than in the one in the text. (See the *National Gazette*, September 14, 1822.) Other cases of pretended deafness and dumbness are related by Marshall, p. 156; and Cheyne, p. 143.

"Foderé says, that a good way to detect pretended deafness and dumbness, is to say something deeply interesting to the patient in his presence, and mark the effect it produces on his countenance. Whether the *Great Unknown* has studied Foderé or not, it is impossible to determine, but he illustrates this admirably in *Peveril of the Peak*, where Fenella betrays herself on hearing that Julian is assassinated."

DUNLOP.

* Marshall, p. 130.

† Fallot, p. 76.

‡ Mahon, vol. 1, p. 362, from the *Acta Naturæ Curiosorum*.

Sauvages, in his *Nosology*, makes mention of a mendicant who gave to his child all the appearances of *hydrocephalus*, by opening the integuments of the head near the vertex, and then introducing air between them and the muscles. This infamous fraud was discovered by removing the patch which covered the hole, and prevented the air from passing out. A mountebank at Brest produced similar inflations, together with the appearance of the most hideous deformity, in a child, by means of the introduction of air, and the application of ligatures on various parts of the body;* and not long since, a female in France by the same mode, caused an *emphysema* of the abdominal parietes, so as to resemble dropsy.† Tumours of this nature are readily produced, since the cellular texture is spread over the whole surface of the body, and the air may be introduced through the smallest possible aperture. We must, however, recollect that dropsy, *hydrocephalus* and *emphysema* are marked by stronger and more conclusive symptoms than the mere existence of tumour. A French conscript is said by Beaupré to have excited *ascites*, by injecting water into the cavity of the abdomen.‡ *Anasarca* of the lower extremities has been pretended by means of ligatures.

In 1811, thirty or forty soldiers were admitted into the hospital at Dublin, for, as was stated, *dropsy* and *intermittent fever*. The abdomen was greatly distended and tympanitic, and they complained of great thirst; but the tongue was clean, pulse regular, and urine natural. They were soon cured by the *mixture diabolica*.§ *Tympanites* of the stomach and enormous distension of the abdomen, may also be induced by swallowing air. A French conscript had the power of thus inducing it, and Dr. Thomson in his lectures relates the following instance. "A young boy about ten years of age was apparently attacked with *tympanites*, which recurred at intervals of nearly two years. He had been seen by several physicians and been treated in various ways, without any beneficial result. At the period which I have mentioned, I was called to see him and attended him for a month, without being able to form any idea of the nature of the attack. When, one day, sitting in conversation with his mother, the boy being opposite to me, I perceived him making efforts of

* Foderé, vol. 2, p. 485, quoted from the Bulletin of the Society of Emulation.

† Foderé, *ibid*,

‡ Marshall, p. 153.

§ Cheyne, p. 169.

deglutition and in a short time, the abdomen became distended and tympanitic. These circumstances led me to suspect a fraud, and I accordingly watched him again on two separate occasions and I became convinced that he filled his stomach and bowels with common air, by swallowing it in mouthfuls. I communicated the fact to his father, who soon cured the disease, by giving the young impostor a severe flogging. The boy afterwards explained to me the mode in which he effected his object, and he acknowledged that he suffered great pain from the distension which followed.”*

Physconia was also at one time very prevalent as a feigned disease in India, and supposed to have been caused by swallowing toddy, with large quantities of rice water. Smart purgatives would often remove the disease in the afternoon, but in the morning it frequently returned. Some would appear to have the power of simulating it, by elevating the spine at the loins, when placed on the back for examination.†

A *prolapsed rectum* and *uterus* have each been imitated by means of a portion of animal intestine, in which a sponge filled with a mixture of blood and milk was placed. It was fixed into the vagina or rectum, in such a manner that one of its extremities was left hanging out.‡ *Polypus of the nose* was simulated, according to Percy, by introducing the testes of cocks, and hares' kidneys, into the nostrils:§ *Hydatids of the uterus*, by means of vesicles prepared from the intestines of a pig, and constructed so as to resemble a string of beads:|| A *malignant tumour* of the same organ, by introducing a sponge.¶

Even the *Barbadoes leg* has been imitated by the long continued use of ligatures. In a man sent home from India for a discharge, the thigh measured in circumference $22\frac{3}{4}$ inches, the calf of the leg $17\frac{1}{2}$, and the ankle 15 inches. In six days after the removal of the ligature, the thigh had decreased to 20 inches. and the other parts in proportion.**

* Lancet, N. S. vol. 19. 804.

† Marshall, p. 151, 152.

‡ Mahon, vol 1, p. 357.

§ Scott, p. 151.

|| Ibid. p. 142. Detected by Professor John Thomson in Edinburgh.

¶ Medico Chirurgical Review, vol. 21, p. 153. Detected by Mr. Lawrence in London.

** Scott, p. 154.

Hydrocele. This disease is imitated by introducing air through a small incision, or it has been actually excited by injecting fluids. Some surgeons in the French army were convicted of doing this and severely punished. In the first case, the fraud may be detected by the lightness of the tumour, its sonorousness and the crepitation on pressure, but an accurate discrimination is more difficult in the case of injected fluid. It will however be more generally diffused than in the real disease, and if the patient be secluded and attentively watched, early absorption is found to occur.* The appearance of *hernia* has been produced in the same way, or its sac imitated with the bladder of an ox. A receipt for producing hernia by inflation, seems to have been current in the British army.†

Some men have, however, the power of retaining the testes in the groin, by the voluntary action of the cremaster muscles; and the swellings thus resulting, have been mistaken for hernia. An individual of this description was detected by Mr. Hutchison. He, to use his own language, soon proved an *alibi* of the testicles from their proper domicile in the scrotum, and caught them peeping through the pope's eyes. The scrotum was an empty bag. The man, on being detected, acted like a philosopher, and "seeing no longer any chance of eluding the king's service, displayed several remarkable feats of the power he possessed over these organs. He pulled both testes from the bottom of the scrotum up to the external abdominal rings, with considerable force, and again dropped them into their proper places with incredible facility. He then pulled up one testis, and after some pause the other followed, as the word of command was given; he then let them both drop into the scrotum simultaneously. He also pulled one gradually up, whilst the other was as gently descending; and he repeated this latter experiment as rapidly as the eye could well follow the elevation and descent of the organs, so that my assistant and myself were not only surprised, but so exceedingly amused that we could hardly believe the evidence of our senses."‡

* Devergie, vol. 2, p. 919.

† Sir A. Cooper's Lectures, vol. 1. p. 75. Cheyne, p. 129.

‡ Hutchison, p. 187. In Vidocq's Memoirs, (which I presume are to be taken with a grain of allowance,) frequent allusions are made to the talents of French rogues and villains, in counterfeiting diseases. Tobacco juice was swallowed by them to produce fever; and at the Bicêtre, they taught one another how to produce

Every writer on feigned diseases, notices *contractions* and *deformity*, and their consequence, *lameness*. The subjects will maintain particular joints for so long a time in one position, that they assume the appearance, on a superficial examination, of being ankylosed. In consequence of inaction also, and the use of ligatures, these parts often become thin. Patient and long continued watching, combined with the use of appropriate remedies, and at the same time disguising the appearance of suspicion, will often succeed in detecting the real nature of the case. An emetic has been given, and during the sickness produced by it, the contracted limb has been found to yield to a very slight force. Electricity has been effectual with some; a pulley with others. The French surgeons attached a weight to a riband placed around contracted fingers, and in a few minutes (not exceeding ten) the disease was removed. They also made those who complained of contraction of the lower extremities, support themselves for some time on the healthy leg alone. The trembling and elongation of the other, soon manifested the deceit.* “A tourniquet may be placed on the limb above the joint, by which the muscles are prevented from acting, and the joint becomes in consequence moveable.”†

Again, feigned cases have been detected by an examination of the part during sleep; or by engaging the person in interesting conversation; or by making continued flexion of the healthy extremity. The diseased one has thus been forgotten, and it insensibly returns to its natural state. Yet with all the keenness that long experience may be expected to produce, there are many who succeed in deceiving the examiner. “A convict who was confined on board the Retribution hulk at Woolwich during the period of his sentence, which was seven years, kept his right knee bent so as not to touch the ground with his foot all that time; and he was, on that account, not sent to hard labour with the other convicts. He was commonly employed in executing light jobs, which he could do in a sitting posture. When he moved from

wounds and sores. Vidocq himself made his head to swell like a bushel; and he says, “it gave no pain, and all traces of it could be removed by the day following.” A murderer who had suffered a long confinement, in order to obtain a moment’s sunshine, counterfeited death so well and so often, “that when he actually breathed his last sigh, two days passed before they took off his iron collar.”

* Orfila, Leçons, vol 1, p. 408. † Scott, vol. 2, p. 139.

place to place, he used to hop upon the left foot with the assistance of a stick. At the end of the seven years, he was discharged; and upon going away, he very coolly observed, 'I will try to put down my leg—it may be of use to me now.' He did so; and walked off with a firm step, without his stick, which he had previously thrown away."*

Some of the best formed men in the British army feigned various distortions—as of the spine, the chest, or the limbs. It is hardly necessary to say, that nothing but careful and repeated examination will detect the fraud. *Wry neck* was also not uncommon in France. In real cases of this disease, according to Orfila, the sterno-cleido-mastoideus of the opposite side is not tense; but in feigned ones it is. The impostor, also, cannot readily turn his eyes to the side opposite to the contraction.†

Ulcers are frequently induced by the use of epispastics, acetate of copper, quicklime, the juice of euphorbium or other acrid plants; and real ones are often prevented from healing by similar means. Some again cause them by rubbing the part, and they have been known to keep up irritation by thrusting pins through the bandages. Besides noticing the nature of the discharge, whether it be pus or sanies, and also attending to the habit of the patient, it is sufficient to mention, that ulcers caused intentionally are readily distinguished from real ones, since their borders are less callous, their surfaces more superficial, and generally less painful; and by the use of lukewarm water, and covering them with lint, they are readily healed; and the reason for this is, that they do not originate from or accompany a disease of the system.

* Scott, vol. 2, p. 138. A writer in the Boston Medical and Surgical Journal, (vol. 8, p. 284,) suggests the idea, that the sudden recovery of lost powers is not a positive proof of malingering. To a certain extent, this may be true; but these cases it will not be so difficult to decide, as those of an opposite description. A man is struck with a stick or hammer, about the hip joint. He recovers from the external bruises, but continues lame. Nothing that indicates injury can be discovered on examination; but remedies produce little or no effect, and the individual walks with a crutch. A case of this kind became the subject of a lawsuit in Glasgow some years since. The injured thigh had sensibly diminished in size; but this was attributed, by the witnesses on one side, to the prosecutor not giving the limb its due share of motion. It is however well put, that if this was a case of feigned disease, the inactivity being only for the public eye, would have been so trifling as not to cause this extenuation. The probability was therefore in favour of its reality. (Lancet, N. S. vol. 8, p. 740, from Glasgow Medical Journal.)

† Orfila, Leçons, vol. 1. p. 409.

Frauds of this description are frequently attempted in hospitals, or to avoid the performance of labour of every kind. In 1810, a fellow enlisted in the marines at Portsmouth, (England,) and received his full bounty. In a few days, it was discovered that he had a very bad leg. On investigation, it was proved by his wife and others, that to avoid going on duty, he had made an incision in the flesh just upon the shin bone, and put a copper halfpenny on the wound, which almost immediately caused a violent inflammation. He ultimately, however, paid most dearly for his speculation; as a mortification followed, and it was found necessary to amputate the limb.*

Mr. Hutchison amputated the leg of a man at Deal Hospital, for a caries of the tibia, extending from the ankle joint to the knee. The patient persisted in denying that he had ever "played any tricks" with his leg; yet on dissection, a piece of copper coin was discovered, imbedded between the gastrocnemius and soleus muscles, nearly three inches from the margin of the ulcer. He then confessed that he had thrust it into the ulcer about nine months before, with a view of obtaining his discharge by invaliding.† To prevent all injury, Mr. Hutchison was obliged, in many instances, to secure the leg in wooden boxes, made like a boot, and closed with a lock.

Nor is deception confined to common ulcers. Even that dreadful disease, *cancer*, has been feigned. "I have seen," says Pierre Pigray, "a woman present herself to the late king of France, to be touched by him," (as the former kings of France

* Edinburgh Annual Register, 1810, part 2, p. 105.

† Hutchison, p. 143.

"During the war, ulcers were feigned to a prodigious extent in the army, for the sake of procuring discharge, and getting a fresh bounty for enlisting. A scoundrel of the name of Noble, in the neighbourhood of Glasgow, who used to carry my bag a partridge shooting, often boasted to me, that he had been discharged from six different regiments by the very means mentioned in the text. In the York Hospital, in the years 1812-13, we had many cases of this kind from the Peninsula; and were obliged to lock up the leg in a wooden box, prepared for the purpose, in order to secure ourselves against the patient tampering with the sore.

"On a late visit to Sheerness, my friend Mr. Robertson, surgeon to the convict hulks, told me that the number of patients with ulcers on the legs was, some months prior to this, so alarming, that he was afraid that the Secretary for the Home Department would take it up. But suspecting some fraud, he employed spies, when he found that all this disease was occasioned by a process termed, in the flash language, *fox hunting*; that is, rubbing the sand used for scouring the deck, with the thumb to the thigh bone. He cured half a dozen of them convicted of this practice—had them flogged, and never had an ulcer in his hospital since." DUNLOP.

were said to perform miracles in this way,) "who appeared to have a very large and ill-looking cancer of the breast. It seemed so extremely natural, that it might have deceived the spectators; but when I observed that she was young, of a good habit, well formed, and without any symptom of cachexia, I was led to suspect deceit. On touching the ulcer, I ascertained, though with some difficulty, that a part of a spleen had been glued on its smooth side to the nipple, which left on the outside a serous and reddish kind of matter, similar to that of cancer. When this was removed, the nipple remained white, healthy, and well formed."*

A false eruption of *petechiæ* or *pustules*, may be detected by examining the patient perfectly naked.

Ozæna has been imitated by introducing cantharides or blistering plaster into the part. *Fistula in ano*, in the same manner. It is only necessary to cleanse the parts, and examine their condition, in order to ascertain the real nature of the disease.

Wounds, with reference to this subject, are very properly divided by Drs. Scott, Marshall and Forbes, into *fictional* and *factitious*. Of the first, or those which have no existence, or are very slight, it would seem that they are most commonly feigned during action, to avoid danger. Contusions may be intentionally given, but their appearance seldom equals the impinging of musket or cannon balls. One case is mentioned, where the part was stained, to imitate the purplish yellow hue of ecchymosis when on the decrease. It was alleged that the contusion had been received some time previous.†

Fractures of the thigh have been feigned; but it is found, on examination, that the muscles of the injured leg are hard and in full action, while those of the other are inactive and soft. A piece of metal has also been inserted into the head, to indicate previous fracture of some part of the skull. Mr. Marshall mentions a case where a soldier thus succeeded in procuring a discharge. He was, however, afterwards detected.‡

Under *slight wounds*, I may as well notice the insertion of needles into various parts of the body,—as the arms, hands,

* Quoted from his Surgery. Mahon, vol. 1, p. 358. Foderé, vol. 2, p. 486.

† Scott, vol. 2, p. 156.

‡ Marshall, p. 173.

breasts, &c. Two cases are related of females doing this. One happened at the Richmond Hospital, Dublin; and the irritation and inflammation ran so high, as to render amputation near the shoulder joint necessary. The other was at Copenhagen. As the needles were extracted, others were inserted in different places—so that no less than four hundred were removed from various abscesses in about three years. In the first instance, the individual made a confession; in the second, she was seen introducing them under the skin.*

Factitious wounds, or mutilations produced voluntarily, present some points of greater difficulty. It will always be a question whether they were not caused accidentally. The practice itself is of ancient date. Among the conscripts of Ancient Rome a common species of mutilation was cutting off the thumb, and from this (*pollicem truncando*) it would appear, that our modern word *poltroon* is derived.† It was common during the last war, both in England and in France, and the injuries were inflicted either by fire arms or cutting instruments, and generally on the upper or lower extremities. In one regiment, at the Cape of Good Hope, nine disabled themselves in six weeks, for the purpose of being discharged.‡

Nothing is more common, in modern Egypt, than the mutilation of male children, in order to avoid the conscription, according to Mr. Lane, a resident there for several years; and referring particularly to the year 1834 “there is now seldom to be found in any of the villages, an able-bodied youth or young man, who has not one or more of his teeth broken out, that he may not be able to bite a cartridge, or a finger cut off, or an eye pulled out or blinded, to prevent his being taken as a recruit.”

Each case demands a separate investigation. A dragoon said that his horse had bitten off his finger, but he forgot to wipe his bloody sword which lay in the manger. Another came running with two amputated fingers, produced, as he said, by the collision of water casks. The cuts were clean and the amputation complete. Another lost his thumb by falling on broken glass, but there was not the mark even of abrasion, beyond this single severe excision.§ The French soldiers sometimes caused their

* Scott, vol. 2, p. 148.

† Scott, vol. 2, p. 156.

‡ Marshall, p. 177.

§ Marshall, p. 179. It is now provided that in all cases of maiming, whether the

teeth to be filed off, or extracted, so as to be unable to bite off the end of the cartridge.

After the bloody battles fought by Napoleon, at Lutzen, Bautzen, and Wurchen, it was insinuated to him that some of his soldiers had voluntarily mutilated themselves, particularly in the hands and fingers. On investigation, nearly three thousand were found thus injured. They were collected together, and a medical jury was appointed, over which Larrey presided. On examination, it was found that nearly all the wounds had been inflicted by contusing bodies, propelled by fire arms, and but a few, by polished weapons. Again, a majority of them, presented other wounds on various parts of their bodies.

The verdict was favourable to the gallant soldiers. Larrey ascribes the great predominance of this kind of injury—to the fact that they fired in three ranks, and those in the second and third involuntarily rested the barrels of their guns on the hands of those in the first rank; and again, the enemy occupied the summits of several hills, and of course fired down upon the French, who in return, would have their hands constantly raised to their guns.*

A case in civil life was investigated by Dr. Marc. The individual under the idea, as it would seem, of rendering himself of importance to a relative, or to secure his gratitude, pretended to have had a murderous conflict with some assassins, although no dead bodies could be found. His head was wounded, longitudinally, to the extent of about an inch, and in direction from left to right. The integuments only were divided. The hat of soft felt, was cut for nearly three inches and in a direction from right to left. A cotton bonnet and a silk handkerchief, which he wore under his hat, were also divided. Dr. Marc observes, that a blow so powerful as to divide all these, should have inflicted a less superficial lesion.

As collateral evidence, the appearance of the knife used in killing the assassin, was adduced. It had a thick covering of

injury occurred on or off duty, whether accidentally or intentionally, the soldiers shall be tried by a district court martial, as soon after the event as possible. Balingall's *Military Surgery*, p. 587. No pensions are granted except the injuries occur in the performance of military duty.

* Larrey's *Surgical Memoirs*, translated by Dr. Mercer, p. 107. Chaussier, p. 487.

The reader of French history will find an instance of factitious wound in the case of Joly, during the quarrels of the Fronde.

blood. Now this was hardly consistent with the idea of stabbing, since on drawing it out, the flesh and the clothes would both rub off a portion, and what remained would be in longitudinal striæ. Dr. Marc was of opinion, that it had been daubed on. He deemed the whole case pretended, *the effect not corresponding with the force of the ascribed cause.**

Similar cases have been recently detected at Paris, principally from the *slightness* of the wounds. They were not such as a robber or a murderer would inflict. The celebrated Dupuytren was called as an examiner in one of them, and he related before the detected individual the following circumstance.

As Napoleon was one evening in the park of St. Cloud, a young man rushed towards him, with the cry of "*assassins! save the First Consul!*" He fell near the group which surrounded Bonaparte, and on examination two wounds were discovered, from which blood flowed. He represented that he had been studying in the park, when he overheard concealed conspirators waiting the favourable moment for an attack, and on being discovered, was thus wounded by them. The gates were instantly closed, but no conspirators could be found. During many examinations, he persisted in this story, and it was only at the end of fifteen years, that he confessed that he had inflicted the wounds with his own hands.†

From the enumeration now made, it is evident, that without due vigilance, the military strength of a country may be seriously impaired, by deceptions among its soldiers and sailors, and the duty of the medical officer thus becomes a highly responsible one. He is to guard against fraud on the one hand, and severity on the other. Nothing can compensate for the reflection that he has unjustly condemned, or caused to be punished, a man who, it is subsequently proved, laboured under disease. I have already mentioned instances where mistakes have been made. Many others are enumerated by writers, and particularly of that class, where deep seated pain is the principal symptom. Dr. Cheyne speaks of one, who was treated as a malingerer and sent to drill,

* Annales D'Hygiène, vol. 1, p. 257. There is another doubtful case of assassination in vol. 9, p. 417, although the Physician, Dr. Breschet, inclines in favour of the wounded person. All the wounds were extremely superficial, yet evidently made with a cutting instrument.

† Annales D'Hygiène, vol. 11, p. 188. Devergie, vol. ii, p. 159.

until a lumbar abscess appeared, of which he died.* In reflecting on these circumstances, and the many obstacles to a full detection, I am very ready to withdraw a somewhat rash assertion which I made in a previous edition, that it is disgraceful for a surgeon to be deceived by an individual who feigns his maladies. I am convinced that the remark was altogether too strong and too broad.

Much may be done to detect, by conversing with the individual alone—by a patient investigation of the nature of the disease—by concealing all doubts concerning its reality, and by neglecting the individual, if we are satisfied of his fraud, rather than consigning him to punishment. No harsh means, beyond those proper for the real disease, should ever be used by the surgeon.† It may be well also to remember, that a general disposition to feign disease often has its origin in the severity of the service, or the inhumanity of some, who are clothed with authority.

Pretended pregnancy and delivery, and feigned insanity, will be noticed in subsequent chapters. And I shall conclude the consideration of the present topic, by remarking, that physicians are not unfrequently called upon to examine impostors, or those who feign diseases which can have no existence. The full considera-

* Cheyne, p. 137. "I received (says a writer in the Glasgow Medical Journal, August, 1831,) an impressive lesson of caution in these matters, by my acquaintance with a case which occurred in the Infirmary of Edinburgh nearly thirty years ago. A street porter, after a fall, began to complain of pain stretching along the whole outside of the thigh. The pain was much aggravated by motion, so that he could not walk across the ward without a crutch. The case being supposed to be sciatica, he was under the care of the late Dr. Duncan, assisted by my lamented friend Dr. Bateman, who acted as clinical clerk. The most attentive examination, scrupulously and laboriously made, could discover nothing deviating from the ordinary structure and appearance; nor was there any general affection of the system. Our patient, too, was the object of suspicion. It was a severe winter; employment for porters was said to be scarce; the lodging and food of the infirmary were comfortable, and the alimient from a benefit society was accumulating in his favour. He readily submitted to the most violent counter-irritants, but without acknowledging any relief. Perkins's metallic tractors, then in high vogue, were applied with due solemnity; and this was the only application which relieved the pain. This admission on the part of the patient, however, only served to confirm our suspicions. He was dismissed from the hospital, with *simulation* affixed to his name in the records; and, as we understood, he was struck off from the roll of the Friendly Society. But about two weeks after his dismissal, he died of an apoplectic attack. The thigh complained of was inspected. The cartilage covering the head of the femur, was partially destroyed; and purulent matter, to the amount of two ounces, was found in the cavity of the joint." *Lancet*, N. S. vol. 8, p. 737.

† Cheyne, p. 179.

tion of these, however, belongs strictly to medical police ; since they are seldom subjects of *legal* investigation.

It has generally been the case, that the hope of exciting public curiosity, and of course, commiseration and charity, has been the moving principle of impostors ; and they have justly imagined that the feigning of ailments contrary to the course of nature and the experience of mankind, would most readily answer the purpose.

Abstinence for a great length of time, is the most frequent, as well as the most successful of these deceptions ; and the reason is obvious. It is practicable to a certain extent, and the most constant and minute attention is requisite to detect the falsehood. The most noted, because it is the most modern case, is that of Ann Moore, the fasting woman of Tutbury, (England.) According to her account, she commenced in March 1807, and continued fasting for six years. At the end of that period the imposture was discovered, in consequence of a watch placed over her ; and it was ascertained that her daughter secretly gave her food and drink. The *cui bono* is readily explained from the statement of Dr. Henderson, who observes that she made so much by the exhibition of her person, as to place £400 in the stocks. She had, however, the power of abstaining from food for a considerable length of time. During the last watch, she received none for nine days and nine nights.*

I will add only one case to the preceding. Cicely De Rydgetway, in the 31st year of Edward III. was indicted, and condemned for the murder of her husband. It is stated that she fasted in prison forty days. A record, lodged in the Tower of London, contains an account of this remarkable abstinence ; attributes it to a miraculous power, and adds, “ Nos ea de causa pietate moti ad laudem Dei, et gloriosæ Virginis Mariæ, matris suæ, unde dictum miraculum processit, ut creditur.” It concludes with a full pardon of the criminal.†

* Observations on this case may be found in the 5th and 9th volumes of the Edinburgh Medical and Surgical Journal ; and also in the London Medical and Physical Journal, vols. 21, 24, 29 and 30.

† London Medical and Physical Journal, vol. 31, p. 50. I add the following references for the use of those who may be desirous of examining the subject of abstinence :

A female in Germany, who imposed on the public for two years. *London Medical and Physical Journal*, vol. 7, p. 190.

Mary Thomas. *London Medical and Physical Journal*, vols. 21 and 30.

Hildanus, Ramazzini, Block, Doebel, Fontenelle, and Dr. Willan, are quoted by Mr. Granger and Dr. Henderson, in their papers on Ann Moore's case in the *Edinburgh Medical and Surgical Journal*, vols. 5 and 9.

Cases are also recorded in *Stalpart Van Der Wiel*, vol. 2, observ. 15—*Haller's Physiology*, vol. 5, p. 168—*Schurigius's Chylogogia*, chap. 4—*Edinburgh Medical Essays and Observations*, vol. 5, part 2, p. 1 and 6.

State Trials, Emlyn's edition, vol. 5, p. 482. Trial of Richard Hatheway, for a cheat and impostor, at Surrey assizes, March 24, 1702. Among other things, he said that he had been bewitched by one Sarah Murdock; and in consequence of this, he could not eat, but fasted ten weeks.

Harleian Miscellany, vol. 4. p. 41. A discourse upon abstinence, occasioned by the twelve months' fasting of Martha Taylor, the famed Derbyshire damsel: by John Reynolds, surgeon.

Memoirs of Literature, vol. 3, p. 112. Account of a Swedish damsel, who has lived six years without food: attested by the Bishop of Skara, (West Gothland.)

Republic of Letters, vol. 2, p. 439. History of a singular and extraordinary distemper in a woman, by Dr. Michelletti.

Philosophical Transactions, vol. 14, p. 577; vol. 28, p. 265; vol. 31, p. 28; vol. 42, p. 240; vol. 67, p. 1.

Medical Commentaries, vol. 14, p. 360.

Medical Communications, vol. 2, p. 113. Dr. Willan's case.

Quarterly Journal of Foreign Medicine and Surgery, vol. 5, p. 190.

References in *Elliotson's Blumenbach*, p. 301-3.

Two cases of females, one in Holland, and the other in Italy. *Medico-Chirurgical Review*, vol. 23, p. 204.

A case, supervening on Chlorosis. by Dr. Forry of Maryland. *North American Archives*, vol. 2, p. 365.

NOTE.

Dr. BECK has noticed mental alienation as a feigned disease, in the ninth chapter. In this view, however, it is intimately connected with the first section, and the following cases, taken from Mr. Marshall's *Hints to Medical Officers*, will well illustrate the difficulty of detecting imposture, and the necessity of extreme caution in coming to a decision.

"Some time ago a man enlisted in a regiment at present (December 1827) quartered in the garrison (Dublin,) who, after being at drill an unusually long period, could not be taught his duty. Every exertion was made by the adjutant and drill-sergeant to make him comprehend the manual and platoon exercise, but apparently without success. In consequence of this corps having been joined by another regiment, the presumed idiot was discovered to be a deserter, and a very clever fellow."

The following, however, is a more melancholy instance of imposition being suspected where it was not practised, and will show with what anxious caution a decision should be made that may render an individual liable to punishment. It is copied from the same work.

"Private Charles Louis, aged 31, ——— regiment of foot, complained, during the month of December, 1825, of pain in the loins, occasioned, as he said, by a sprain, received the preceding July, while drawing water from a well, but which he did not mention when the accident happened. As the ailment was considered very slight, he was not admitted into the hospital. He continued, however, to complain of pain in the loins, and about the site of the cæcum. On the 26th of January, 1826, he went on furlough, and returned to the regiment on the 26th of February. From this period he obstinately refused to do any duty, assigning as a reason that he was unable. He was then admitted into hospital, where he was kindly treated, but carefully observed.

His appetite and other functions of the body were natural, and no trace of disease could be detected. He sometimes complained of uneasiness in the region of the liver, but never represented the pain as urgent; and, indeed, seldom said any thing respecting his ailments, unless in reply to direct queries. He was in general remarkably taciturn; and his manner appeared to be more indicative of moroseness than of mere lowliness of spirits. Eventually he was discharged from hospital, but still persisted in refusing to do his duty. He was tried by a regimental court-martial, for disobedience of orders, which sentenced him to undergo corporal punishment; and on the 15th of March he received 175 lashes, in the usual manner, without making the slightest complaint. He still, however, declined doing duty; and was a second time tried by a court-martial, and sentenced to be confined for one month in a solitary cell. When released from confinement, he was ordered to pull up the grass between the stones in the barrack-yard—an employment which annoyed him more than any other punishment. His case was now brought to the notice of Lieutenant-General Sir George Murray, commander of the forces in Ireland, with a recommendation that he should be transferred to the General Military Hospital, Dublin. This suggestion being adopted, Louis was admitted into the General Hospital on the 30th of May, where he remained under the care of Dr. Cheyne, until the 12th of July, when he rejoined his regiment. During the time he was in Dublin, he preserved his usual gloomy, discontented manner. The greatest care was taken to investigate his case, but no trace of disease, either physical or mental, could be satisfactorily observed; and a certificate to that purpose, signed by Dr. Peile, deputy-inspector of hospitals, Dr. Brown, surgeon to the forces, Dr. Crampton, surgeon-general, and staff surgeon Stringer, was transmitted to the regiment upon his being discharged. Shortly after Louis had joined the regiment, he evinced decided symptoms of aberration of mind, which were for a considerable time supposed to be feigned; but after close observation for several months, the surgeon of the regiment deemed his intellect to be unsound. In July 1827, he was again admitted into the General Hospital, Dublin, in consequence of mental alienation; and it is the opinion of Dr. Cheyne and the other officers of that establishment, that there can be no doubt of the reality of the mental affection. He is still (December 1828) in hospital: his manner is much less gloomy than formerly; and he shows no reluctance to discuss topics connected with his present hallucination. He, however, artfully eludes every attempt to extract any information from him respecting his family or early life. Among many other incoherent notions which have entered his mind, he conceives that he is colonel of the 15th regiment, and that he is abounding in wealth, but that he is deprived of the use of it by undue means. His bodily health continues good."

The work above quoted may be consulted with great advantage on the subject of feigned diseases. It is entitled, "Hints to Young Medical Officers of the Army, &c." By Henry Marshall, Surgeon to the Forces.

DARWALL.

CHAPTER II.

DISQUALIFYING DISEASES.

Disqualifications in civil cases—in criminal cases. Disqualifications for military service. Classes exempted by the law of the United States. Law of the State of New-York on exemption from military duty. Regulations for exemption in France—in Prussia. Rules for the inspection of recruits in England. Diseases that exempt or disqualify—statistical results. Law decisions on pleas for exemption. Certificates of exemption and discharge. Laws respecting these.

THIS chapter, and the one preceding it, are intended principally for the use of the military physician and surgeon. But although the subject of disqualifying diseases falls peculiarly under their notice, yet there may be numerous instances in civil life, where the opinion of the medical man is required concerning them. He may be directed, for example, to ascertain whether an individual is fit to serve on a jury, whether he is able to attend as a witness, or whether he is competent to take on him certain offices or duties. Again, a physician may be ordered to investigate the condition of a criminal, and to report whether he is capable of undergoing hard labour, or of suffering other severe punishments that are inflicted by the justice of his country.

I shall accordingly consider this subject as follows:

1. As to the disqualifications in civil and criminal cases.
2. As to the disqualifications for military service.

I. Of disqualifying diseases in civil and criminal cases.

In civil cases, the presence of acute diseases should undoubtedly exempt from the performance of most of the offices or duties to which an individual can be called. The imminent danger which may follow from muscular exertion, together with the weakened state of the mental faculties, which generally accompanies these ailments, renders a demand for such performance cruel and oppressive. And accordingly, in all countries, where the law governs, the proof of this is deemed a sufficient exemption. But there may be diseases, on which a doubt exists,

whether the required exertion would prove injurious; as, for example, rheumatism, asthma, and particularly epilepsy. Concerning such, it would be idle to give any specific rules, farther than to observe, that it behooves the examining physician to inquire into the nature of the particular case, and from his knowledge of it, to be guided in his testimony. Should there be a patient liable to convulsive affections, and who is only preserved from frequent attacks by being kept calm and sequestered, he certainly would not be a proper person to serve on a jury, or to be kept for a length of time as a witness before a crowded court. The same remark applies to those who are labouring under infirm health, or a predisposition to consumption, who have symptoms of aneurism, of stone in the bladder, &c., or who suffer from periodical or continued attacks of pain in one or the other organs. The humane, and therefore the just rule in all these cases, is to exempt the subjects of such maladies from all duties that are not indispensable.

The distinction, however, should be kept in view, that many who are unable to travel without great danger, may still be examined at their own houses, and that thus the ends of justice can, in a great degree, be answered.

In elucidation of these remarks, and as showing that they are practically observed, I will quote only two cases.

In *Andrews v. Palmer* (1812) depositions taken, *de bene esse*, were presented upon the incapacity of a witness, from bodily injury, to attend a trial. Lord Eldon remarked, "this affidavit is too loose, that the witness will not be able to travel for a considerable time. The surgeon ought to have made an affidavit, with reference to the time when the trial is to come on, pledging his professional judgment to the probability, that the witness will not be able to attend. If the affidavit was more precise in that respect, I think I ought to make such an order as I have mentioned," viz: for the officer to attend with the original deposition.

An affidavit was afterwards produced, more precisely worded, and the order was made accordingly.*

On the trial of Mary Elder or Smith, for poisoning with arsenic (and which will be hereafter noticed) a jurymen was taken sud-

* 1 Vesey and Beames' Chancery Reports, p. 21.

denly ill. Drs. Christison and Mackintosh, who were in attendance as witnesses, immediately visited him in an adjoining room, and on their return, being sworn, stated that he had been seized with a fit of epilepsy—that the convulsions had ceased, but that his memory was, as yet, only partially restored. Both agreed, that he might be able to return to his duty that night, but it was not likely. A relapse might be the consequence.

“Lord Gillies had no doubt. They could not, with propriety, with any regard to decency and humanity, insist upon his resuming his place in the jury box.” The other judges concurred, and subsequently a new jury was chosen.*

As to criminal cases, it is equally unnecessary for me, to enlarge, since the well known humanity of our country renders it superfluous. I may, however, remark, that while acute diseases deserve commiseration and attention, as much as in the preceding instances, there are also some affections which should prevent or delay the execution of the higher punishments.† We can readily imagine a state of body in the criminal, that would make the application of irons to his limbs, or the condemnation to hard labour, a sentence more dreadful than death itself.

In all cases, whether of a civil or criminal nature, every thing must depend on the skill of the physician, and the correctness of his testimony concerning the diseased person. As it is impossible to suggest specific rules, applicable to every instance that may occur, so it will be his duty to study the peculiar symptoms and indications with great attention, and while he leans to the side of mercy, avoid being deceived by feigned representations of imaginary maladies.‡

II. *Of disqualifications for military service.*

In every state, however despotic, there are certain classes of individuals exempted from military duty. This is in fact deemed indispensable, even with those who consider the male population merely as the material for armies. There must remain some to renew the waste of war—some to support the females and children of the nation, and others to protect them from injury.

* Syme's Justiciary Reports, p. 72.

† Two of these are so important, to be ascertained with certainty, that I shall treat of them under their respective titles, viz: pregnancy and insanity.

‡ See on this subject Foderé, vol. 2, p. 431, &c.

The Jewish lawgiver, in his statutes, mentions several classes who were exempted from this duty, and in particular, all married persons during the first year of their marriage.* And similar provisions are to be traced in the laws or customs of all countries.

In the United States, by a law of congress, all persons under eighteen years of age and above forty-five, are exempted. The importance of this regulation in time of war is incalculable, since it prevents the destruction of such whose strength is not yet matured, as well as those who are already feeling the advances of age.† It is also understood, that there are many diseases which disqualify or exempt from military duty. In this state, the law formerly directed that the age and ability of a person enrolled to bear arms, should be determined by the commandant of the company, with the right of appeal to the commanding officer of the regiment, and it added "*that the certificate of a surgeon or surgeon's mate, shall not be conclusive evidence of the inability of any person to bear arms.*"‡ In the Revised Statutes, the phraseology on this subject is somewhat altered. The enactment stands thus, "Persons claiming to be exempted from enrolment, by reason of inability to bear arms, may produce the certificate of a surgeon or surgeon's mate, as evidence of such inability, but such certificate shall not be conclusive, nor shall it be lawful for the person giving the same to take any fee or reward therefor."§

If there be any difference between these, of which I am not very positive, it must be that by the former law, the commanding officer of the regiment had the power of rejecting the surgeon's certificate, while in the latter, this would rather seem to be referred to a court martial. However this may be, both equally

* Deuteronomy c. 20, v. 5, 6, 7; c. 24, v. 5. See Michaelis vol. 3, p. 34, for an enumeration of the classes that were exempted.

† "After the battle of Leipsic, Napoleon made great exertions to recruit his army, and called upon the legislative senate to give him their assistance, to which they showed some reluctance. 'Shame on you,' cried the emperor, 'I demand a levy of 300,000 men. But I must have grown men; boys serve only to encumber the hospitals and road sides.'"—Edin. Med. and Surg. Journal, vol. 36, p. 137.

‡ In an English regiment, employed in the Burmese territories in 1824, the ratio of mortality among the young men was 38 per cent., or 1 in every 2½; while among those who were considerably older, the mortality was 17 per cent., or 1 in 6. (Dr. Burke, Inspector General of hospitals, quoted in Medico-Chirurgical Review, vol. 21, p. 261.)

§ See the "act to organise the militia," passed April 23, 1823.

§ Revised Statutes of the State of New-York, part 1, chap. x, title 3.

show the necessity of the surgeon's being acquainted with disqualifying diseases.

The military system of FRANCE being more perfect than that of any other nation, it might be expected that rules on this subject would there be formed; and accordingly we find that such were promulgated at an early period after the revolution. A number of the inspector generals, (viz: *Coste, Biron, Heurteloup, Villars, Parmentier, Bruloy, Imbert, and Kanens,*) were constituted a council of health of the armies; and they prepared certain tables of diseases, which partially or totally exempted from military duty. This was done during the reign of the directory, (year 7 of the republic;) but they were incorporated into the *Code de la conscription* by Bonaparte.

Among the preliminaries necessary to obtain an exemption, are the following: Every conscript who pleads bad health or bodily inability, must appeal in the first instance to his municipal administration; and he is not entitled to present himself for this purpose, unless he bring a certificate from a health officer, that he is really affected with a disease which appears to him to authorise an application. He is then to be examined by a health officer in presence of the administration, if he be capable of attending, or in presence of a delegate from it, if he be totally unable to attend in person. Before any dispensation be granted, the commissioner of the executive directory must be heard; and he may, if any doubts be entertained, require a counter-examination. When the municipal administration consider any appeal to be without foundation, the conscript is obliged to join the army without delay. When they consider themselves incompetent to decide upon the appeal, the conscript is allowed to present himself immediately before the central administration, for their decision. And the municipal administration can only grant *definitive* dispensations in cases of palpable and notorious infirmities. They may allow *provisional* ones, not exceeding three months, when acute diseases or accidents prevent the conscript from presenting himself.

All the decisions of the municipal, must be sent to the central administration, for their approbation or rejection; and if they refuse to ratify them, the conscript must again be examined. Lastly, when they confirm a dispensation, it is sent to the minister

of war, who forwards an exemption to the conscript, or annuls the dispensation.

A distinction is also made as to the diseases to be judged of by the respective administrations. The municipal can only take cognizance of palpable and notorious infirmities; while every application for a dispensation, definite or provisional, for diseases not obvious, or which do not prevent the applicant from attending at the capital of the department in person, must be judged by the central administration.*

The officers of health, in giving their opinion, are directed to regulate themselves by the following tables:

TABLE I. *Evident infirmities, implying absolute incapability of military service, and which are left to the decision of the municipal administrations of the canton.*

1. Total privation of sight. 2. The total loss of the nose. 3. Dumbness; permanent loss of voice; complete deafness. If there be any doubt of the existence of these infirmities, or if they do not exist in a great degree, the decision is to be reserved for the central administration. 4. Voluminous and incurable goitres, habitually impeding respiration. 5. Scrophulous ulcers. 6. Confirmed phthisis pulmonalis, *i. e.* in the second or third degrees. Care should be taken to report the symptoms characterizing this state; and as they are but too evident they ought to procure an absolute dispensation. But for commencing phthisis, asthma and hæmoptysis, the municipal administration ought to grant only a provisional dispensation, if the person be incapable of presenting himself before the central administration; the decision in these different cases being reserved to the latter. 7. The loss of the penis, or of both testicles. 8. The total loss of an arm, leg, foot or hand; the incurable loss of motion of these parts. 9. An aneurism of the principal arteries. 10. The curvature of the long bones; rickets and nodosities sufficient evidently to impede the motion of the limbs. Other diseases of the bones, although great and palpable, are sometimes liable to doubt, and therefore are reserved for the judgment of the central administration. 11. Lameness (claudication) well marked, whatever be the cause;

* Edin. Med. and Surg. Journal, vol. 6, p. 138, 139.

this must be precisely stated. The same is the case with considerable and permanent retraction of the flexor or extensor muscles of a limb, or paralysis of these, or a state of relaxation impeding the free exercise of the muscular movements. 12. Atrophy of a limb, or decided marasmus, characterised by marks of hectic and wasting, which should be stated in the report.

TABLE II. *Infirmities or diseases which occasion absolute or relative incapacity for military service, and which are reserved for the examination and opinion of the central administrations of the department.*

1. Great injuries of the skull, arising from considerable wounds, or depression, exfoliation or extraction of the bones. These sometimes occasion all, but commonly several of the following symptoms: Affection of the intellectual faculties, giddiness, swimming in the head, drowsiness, nervous or spasmodic symptoms, frequent pains of the head. 2. The loss of the right eye, or of its use. This defect disqualifies a man for serving in the line, but does not prevent him from being useful to the army in other services, or in the marine. 3. Fistula lacrymalis; chronic ophthalmia, or frequent rheums in the eyes, as well as habitual diseases of the eyelids or lachrymal passages, of such a nature as obviously to injure the powers of sight. 4. Weakness of sight; permanent defects of vision, which prevent objects from being distinguished at the distance necessary for the service of the army; short-sightedness; night-blindness; confusion of vision. In a note it is observed, that these affections of the sight are often difficult of decision; and it is recommended to the surgeon to ascertain the effect of glasses on the persons complaining of near-sightedness.* Nyctalopia, it adds, is rare in youth, and often only temporary; while amblyopia, or confusion of vision, may be known with some certainty, when we perceive that the pupils have changed their diameter, or when they have lost somewhat of their mobility or regularity. This, however, is not always present; and in doubtful cases, it is directed that the testimony of ten individuals, not relatives of the appellants, should be brought, affirming the existence of these defects. 5. Defor-

* See Chapter 1, p. 29.

mity of the nose, capable of impeding respiration to a considerable degree; ozæna, and every obstinate ulcer of the nasal passages or palate; caries of the bones, and incurable polypi. 6. Stinking breath from an incurable cause, as well as fœtid discharges from the ears; and habitual transpiration of the same character, when incurable. Soldiers who emit these fœtid exhalations are rejected by the corps, and repulsed by their comrades. 7. Loss of the incisive or canine teeth of the upper or under jaw; fistulas of the maxillary sinuses; incurable deformity of either jaw by loss of substance, necrosis, or other cause, hindering the biting of the cartridge, or impeding mastication, and injuring the speech. A person without canine or incisive teeth, cannot be a soldier of the line, but may be employed in other services. 8. Salivary fistulas, and the involuntary flux of saliva, when incurable. 9. Difficulty of deglutition, arising from paralysis, or some other permanent injury or incurable lesion of the organs employed in that function. 10. Permanent and well-established diseases of the organs of hearing, voice or speech, considerable in degree, and capable of impeding their use considerably. As these diseases are very doubtful, and may frequently be simulated, it is advised that testimony proving their existence should be obtained, and the examination also should be repeated for several months at stated periods. An absolute or definite exemption need not be given, as they yield to time and skill. 11. Ulcers and tumours of a decidedly scrophulous nature. The symptoms, if any be present, of a scrophulous cachexy, should be stated. 12. Deformity of the chest, or crookedness of the spine, sufficient to impede respiration, and to prevent the carrying of arms and military accoutrements. 13. Phthisis in the first degree; confirmed asthma; and habitual, frequent, and periodical spitting of blood. The state of patients attacked with these diseases is often evidently bad, and accompanied by circumstances which leave no doubt; they then admit of an absolute dispensation. Sometimes they are less decided, when only a provisional judgment is to be given. 14. Irreducible hernias, and those which cannot be reduced without danger. 15. Stone in the bladder; gravel; habitual incontinence or frequent retention of urine, as well as severe diseases or lesions of the urinary passages; fistulas of these parts, whether incurable, or requiring constant medical assistance. In a note, it is remarked, that re-

tention of urine produces well known symptoms, which will guide to a knowledge of the true state of the case. Incontinence may be simulated with less danger of detection; and apparently in order to avoid the advantage that might be taken of this, it is directed, that if the young man has, in other respects, a healthy and vigorous look, *he may be sent to the army without any inconvenience.* 16. The permanent retraction of a testicle; its strangulation in the ring; sarcocele; hydrocele; varicocele; all severe affections of the scrotum, testicles or spermatic cords, known to be incurable. 17. Ulcerated hæmorrhoids; incurable fistula in ano; periodical and incurable hæmorrhoidal flux; habitual and chronic flux of blood from the intestines; habitual incontinence of fæces; habitual prolapsus ani. These ought to be stated by able health officers, who have for a length of time, treated and observed the patient; and a provisional dispensation is only to be given, until their incurability is established. 18. The total loss of a thumb or great toe, of the forefinger of the right hand, or two other fingers of one hand, or two toes of one foot; the mutilation of the last joints of one or several toes or fingers; the irremediable loss of motion of these parts. These, although they interfere in different degrees with several parts of the infantry service, do not unfit for other duties, such as miners, sappers, pioneers, or even for cavalry duty, if the mutilation of the toes or right hand be not considerable. If, therefore, the petitioner, on account of any other mutilation than the loss of the thumb, is in other respects strong and of a robust constitution, he ought to be sent to the army. 19. Incurable deformities of the feet, hands, limbs or other parts, which impede marching, or handling of the arms, or carrying the accoutrements, or the free motion of any weapon. These may produce only a relative invalidity, and hence the physical effects arising from them should be stated. 20. Large and numerous varices. 21. Cancers and ulcers, which are inveterate, of a bad character, incurable, or whose cure it would be imprudent to attempt. The state of body accompanying them should be mentioned. 22. Large and old cicatrices badly consolidated, especially if they have adhesions, and are accompanied by the loss of substance, covered with crusts, or attended with varices. 23. Severe diseases of the bones, such as diastasis or separation, ankylosis, caries or necrosis, spina ventosa; osseous tumours, and those of the periosteum, when considerable, or situ-

ated so as to impede motion, and which have been treated without success. 24. Diseases of the skin, when they are capable of communication; when they are old, hereditary or obstinate, as tinea; acute, moist and extensive herpes; obstinate and complicated itch; elephantiasis; lepra. In all these cases, a definitive dispensation cannot be granted, until after methodical treatment by very intelligent officers of health has been continued in vain, or unless the constitution of the patient be obviously injured. 25. Decided cachexy, of a scorbutic, glandular or other nature, known to be incurable, and characterised by evident symptoms of long standing; dropsies known to be incurable. 26. Debility and extreme extenuation, joined to a diminutive stature, or to a very tall one, out of the ordinary proportions. This case requires great judgment in deciding on it; and it is advised to adjourn the decision from quarter to quarter. "When a conscript has grown very rapidly; when he is tall, lean, and slender made; when he has a long neck, arms and legs; and when his breathing is difficult from the least exercise: such an individual is out of the question, until nature has added in strength what it has hitherto confined to stature." 27. Gout; sciatica; inveterate arthritic and rheumatic pains, impeding the motions of the limbs and trunk. If these are present in an acute form, the conscript has a right to a provisional dispensation; but if they be chronic, particular attention should be paid to the condition of the parts. Gout seldom arrives to a high degree of obstinacy, without leaving nodosities and sensible contractions; while protracted rheumatism alters the form of the muscles and colour of the skin, and causes a wasting of the part affected. The surgeon is warned, in cases where no sensible appearances prove the existence of rheumatism, not to mistake a feigned for a real disease; and the following acute remark is added: "As it is but just that in some other equivocal cases, such as those respecting the diseases of the breast, humanity should incline to the conscript's side; so with respect to pains and rheumatism which are not proven, it is equally proper to prefer severity to indulgence; *as military exercise, far from aggravating the predisposition, if it exist, will only contribute to remove it.*" 28. Epilepsy; convulsions; general or partial convulsive motions; habitual trembling of the whole body, or of a limb; general or partial palsy; madness,

and imbecility. The surgeon, in this class of cases, is to be particularly careful not to be deceived by a simulated disease.*

Such were the rules, devised for the conduct of the inspecting military surgeon, in the days of Napoleon. They have been followed, though with greatly diminished severity, under the succeeding governments of France.

Dr. Marshall informs us, on the authority of Kirckhoff, that these regulations are very closely imitated in the army of the King of the NETHERLANDS. In PRUSSIA, the army is also recruited by involuntary levies, and every man, upon his reaching the age of twenty, becomes available for the services of the state, as a soldier. He is, however, exempted, (among other causes,) if he is furnished with a medical certificate, stating that he labours under an infirmity, either permanent or temporary, disabling him from military service. A list of diseases that disqualify, was transmitted in 1817, to the various military surgeons, by Goercke, physician-general, and chief of the military medical department of the Prussian army. I have compared this with the French tables, and find them very similar. A distinction is, however, taken between the infantry and cavalry service, and it is stated that in the latter, the following do not disqualify for service;—being considerably in-kneed, cicatrices of ulcers on the legs, loss of a great toe—moderately deformed feet and flatness of the soles of the feet. In garrison service also, hydrocele, if not very large—varices of the legs, if not very severe—a slight degree of contraction of the elbow joint—shortness of one of the lower extremities, provided the defect can be remedied by means of a high-heeled shoe—inguinal or femoral hernia, if the intestine can be retained in its place by a truss—loss of any finger, except the thumb, and slight traces of scrofula do not disqualify.†

In France and Prussia, armies are raised by conscription; in ENGLAND, by recruiting. It is, therefore, well remarked by Dr. Marshall, that in the former countries, the regulations are calculated to obviate the *simulation* of defects, while in the latter, they

* These regulations are published in Belloc, p. 344 to 362; and a translation of them, which I have used, is contained in the Edinburgh Medical and Surgical Journal, vol. 6, p. 138, etc.

† Marshall's Hints on the Examination of Recruits, &c., p. 49.

are intended to prevent fraud, through the *dissimulation* of infirmities.

Orders on this subject, have, at various times, been issued by the medical department of the British army.* The latest that I have seen, and which are, probably, still in force, are dated July 30, 1830, and signed by Sir James McGrigor, M. D. director-general of the army medical department. The following are enumerated as the more common causes, for which a recruit should be rejected:—feeble constitution, unsound health, from whatever cause—indications of former disease—nodes, glandular swellings, or other symptoms of scrofula—weak or disordered intellect—chronic cutaneous affections, especially of the scalp—severe injuries of the bones of the head—impaired vision, from whatever cause—inflammatory affections of the eyelids—immobility or irregularity of the iris—fistula lacrymalis—deafness—copious discharge from the ears—loss of many teeth, or the teeth generally unsound—impediment of speech—want of due capacity of the chest, and any other indication of a liability to pulmonic disease—impaired, or inadequate efficiency of one or both of the superior extremities, on account of palsy, old fractures, especially of the clavicle, contraction of a joint, mutilation, extenuation, deformity, ganglions, &c.—an unnatural excurvature or incurvature of the spine—hernia, or a tendency to it from preternatural enlargement of the abdominal ring—a varicose state of the veins of the scrotum or spermatic cord; sarcocele, hydrocele, hæmorrhoids—fistula in perineo—impaired or inadequate efficiency of one or both of the inferior extremities, on account of varicose veins, old fractures, malformation (flat feet, &c.) palsy or lameness, contraction, extenuation, unequal length, bunions, overlying or supernumerary toes, ganglions—ulcers, or unsound cicatrices of ulcers, likely to break out afresh—diseases, whether acute or chronic, for which medical treatment is required; and lastly, traces of corporal punishment, which is declared to be an unqualified cause of rejection.†

The medical officer is also directed to attend to all the circumstances that indicate vigorous health, a capacity for exertion

* Copies of several of these will be found in Marshall, pages 5 and 12. See also Hennen's *Military Surgery*, Amer. edit, p. 354.

† "Instructions for the guidance of Staff and Regimental officers belonging to the medical department in the duty of examining recruits who may be brought before them for inspection," in *Edin. Med. and Surg. Journal*, v. 36, p. 370.

and general efficiency, such as a proper proportion between the trunk and limbs—a firm and elastic skin—a healthy countenance—a lively eye—chest capacious and well formed; belly lank—limbs muscular; feet arched, and of a moderate length—hands rather large than small—teeth in good condition—voice strong.

The recruit is to be undressed before inspection, and is to perform before the medical officer, a certain routine of actions, such as walking—extending the arms—coughing while in that position—standing upon one foot, kneeling, &c., &c. A proper manual examination is, of course, made during these exercises. It is, also, to be ascertained, whether he has had the small pox, or has been vaccinated.

“The certificate of surgeons or assistant surgeons, when they approve of recruits for the corps to which they themselves belong, will be considered final;”* but in other cases, they are to be re-examined by a district staff surgeon, or the medical officer of the regiment to which they are sent.†

Dr. Marshall‡ mentions some curious facts illustrative of the

* “Final approval” refers to the time when the recruit joins his corps. He may be enlisted in some distant part of the country and approved, but, on reaching the place where he is to be formed into a soldier, he must be examined anew by the commanding officer and surgeon.

“In our army, the commandant never interferes except when, from general debility, or obvious bodily infirmity, a recruit is not equal to the duties of a military life. The recruit is first examined by the surgeon of the district where he is enlisted, then by the regimental surgeon on joining: and should any difference of opinion take place, the case is referred, if near London, to the medical board, or if at a distance, to a board specially called together for that purpose.” DUNLOP.

† “These causes of incapacity are and always have been understood. During the heat of the war, when levies of recruits to the amount of 100 or 150 often joined a regimental dépôt at a time, a half witted fellow might sometimes be slipped through, particularly when the officers wished to show a strong paper muster, in order to escape disagreeable duty at home, and be sent on a dashing service abroad, where there were some hopes of promotion from that great desideratum of an officer, ‘a bloody war or a sickly season;’ but these gentry were got quit of as speedily as possible, whenever they had served the purpose for which they were enlisted. At present, we are a great deal too nice as to our recruits, in my opinion, as symmetry of form is now an indispensable requisite for a soldier. Large, broad, or splay feet, for instance, are at present inadmissible; a regulation which amounts almost to a virtual exclusion of the inhabitants of the highlands of Scotland from his majesty’s service; a service, of which, according to themselves and Col. David Steward of Garth, they are so exclusively the ornaments.” DUNLOP.

Those who are curious on the subject of *splay* or *flat foot*, and the disability caused by it, for military life, will see extracts from Marshall’s last work, (including observations by Goercke, the head of the Prussian military medical department,) in *Edinburgh Med. and Surg. Journal*, vol. 38, p. 178.

‡ Besides Dr. Marshall’s “Hints,” he has published another work entitled “*On the Enlisting, the Discharging, and the Pensioning of Soldiers, with the Official Documents on these branches of Military Duty.*” This, I have not been able to procure, but there is a review of it in the *Edin. Med. and Surg. Journal*, vol. 38, p. 136.

necessity of great caution and acuteness in these inspections. Thus, recruits in order to obtain the required height, have been known to glue pieces of buff to the naked soles of the feet, or to rub cobbler's wax among the hair. On the contrary, in France where the object of the conscript is a discharge, he has endeavoured to diminish his height by cutting off all his hair, and paring off the thick cuticle under the soles of his feet.

It is recommended by our author, as the most certain mode of ascertaining the exact height of individuals, to measure them extended on their backs. In 52 cases, thus examined, the perpendicular was found less than the horizontal height, by an average of $\frac{3}{16}$ of an inch.*

Of 57,894 recruits examined in the Centre Recruiting District, Dublin, from Sept. 26th, 1804, to Dec. 24th, 1827, 44,166 were approved and 13,728 rejected, being a proportion of 23.7 per cent.

Of 11,735 men drawn for military duty in the department of the Seine, from 1816 to 1823 inclusive, 5,905 were rejected for the following causes,

Low stature,	1,483
Deformity,	1,021
Infirmities or diseases,	3,401
	<hr/>
	5,905

If we take the per centage of the two last, we shall find it to be at the rate of 43.1, being considerably larger than the other.

I will only add a few of the diseases which produced rejection at Dublin, during the years 1825, 26 and 1827. (Total rejected in those years, 2,747.)

Varicose veins of one or both legs,	340
Ulcers, cicatrices of ulcers, wounds,	252
Hernia of various kinds, or laxity or enlargement of one or both rings,	249
Unsound health, emaciation, &c., sottish intemperance, worn out,	277†

Of our own country, I may remark that the French and Prussian rules are most applicable to our militia, and the English to

* Hints, p. 62.

† Ibid p. 187 to 195. Additional tables will be found in Edin. Med. and Surg. Journal, vol. 42, p. 46. London Med. and Phys. Journal, vols. 50 and 52.

our regular army. I am not aware that the general government has adopted any rules respecting the latter, but I am certain that militia surgeons have no directions on the subject. The only American publication with which I am acquainted, is a report made by the late Dr. Samuel L. Mitchill, then surgeon-general of the militia of this state, to his excellency, governor Clinton, and communicated to the legislature at their session in 1819.* The bodily disabilities for military service are arranged by Dr. Mitchill into classes, with reference to various parts of the body. The diseases enumerated by him are however, all included in the tables that have been quoted, and it is therefore not necessary to repeat them.

I have met with some adjudications under the militia law of Massachusetts, which it may be proper to mention. They were made in consequence of appeals from justices of the peace to the supreme court. In one, the individual was fined because he had not a surgeon's certificate, countersigned by the commanding officer,—although he offered to prove then by the surgeon of the regiment, that he was infirm and not capable of doing military duty. The court held that he should have been allowed to prove his disability, although he had no certificate. The law has reference to an exemption for a term of time and not for one day.†

In another, the surgeon gave a certificate in 1807, that the soldier, by a wound in the left hand, had his thumb and fingers rendered useless, and is unable to perform military service. The captain on this discharged him for life. He was now (1808) nearly two years subsequent, fined for not appearing. The court determined that this was not necessarily an excuse for life, but that the justice before whom he is sued may inquire whether the disability continues.‡

I cannot conclude this section, without recommending that tables founded on those which I have given, should be prepared for the use of surgeons, and that they should be enjoined to grant certificates according to their specifications, and be obliged to report to a superior authority, all cases not coming within them.

* Assembly Journal for 1819, p. 25.

† Howe v. Gregory, 1 Massachusetts Reports, 81.

‡ Commonwealth v. Bliss, 9 Massachusetts Reports, 322. See also the same vol. p. 11, 456, 540.

As to certificates, I have already stated that in this state, "no fee or reward is to be taken for them."

By the French Law, "all officers of health and others convicted of having given a false certificate of infirmities or disabilities, or of having received presents or gratifications, shall be punished by not less than one, or more than two years' imprisonment; or by a fine of not less than 300, nor more than 1000 francs."*

In cases of discharges for various disabilities, and where the possession of these entitles the holder to pensions or gratuities, it is evident, that much care must be taken to prevent imposition. Here, however, the directions given in the remarks on feigned diseases, are more particularly applicable.†

* Edin. Med. and Surg. Journal, vol. 6, p. 139.

† The reader will find in every page of Marshall, the great caution that it is requisite to pursue in the English service, previous to granting these. In the Austrian service, several medical boards sit in succession, in judgment on each other, before the soldier is discharged, and they are held responsible for errors, and may be called upon to refund the amount of any expenses that have thereby been incurred. Marshall, quoted in Medico-Chirurgical Review, vol. 21, p. 260.

CHAPTER III.

IMPOTENCE AND STERILITY.

Laws of various countries concerning impotence as a cause of divorce—Roman law—Canon law—Ancient French law—Napoleon code—English law. Causes of impotence in the male—absolute—curable—accidental or temporary. English, French, and Scotch law on accidental causes as affecting paternity. Banbury peerage case. Diseases that may produce temporary impotence. Causes of impotence in the female—incurable and curable. Causes of sterility—incurable and curable. Notice of English law cases, where impotence was presented as a cause of divorce. Law of the State of New York on this subject—cases—in other States.

A KNOWLEDGE of this subject may become necessary in various ways before judicial tribunals. An individual accused of committing rape, has been known to plead that he was physically incapacitated; while the legitimacy of children has been contested on a similar plea. These examples are sufficient to show the necessity of a brief notice of the physical signs of impotence, even were they not connected with the subject of divorce.

The laws of Moses, and afterwards the Roman law, permitted divorce at the pleasure of either party. The Christian law, however, declares marriage to be indissoluble; and Justinian legislating on this principle, was the first monarch who prescribed the mode of obtaining divorce by law, and at the same time promulgated statutes as to impotence.* He ordained that if the imbecility continued for two years after marriage, (which period was afterwards enlarged to three years,) the female should be entitled to a divorce.†

We are informed, that it was not until the twelfth century that this jurisprudence came into general use. The canon law, under which these cases were judged, always desired (at least in prac-

* Gibbon's Rome, vol. 8, chap. 44, p. 64. † Code Justinian, lib. 5, tit. 17.

tice) that the defect should be shown to have existed before marriage; and that after its celebration, a certain period of time should have elapsed before a complaint was entertained, in order to ascertain whether the impotence was absolute, or only accidental. These dispositions of the canon law were adopted into the civil law of ancient France; and many arrets of parliament have admitted the plea of impotence, and dissolved marriages of eight, twelve, and even fourteen years' standing. Accidental impotence, however, in the sense I shall hereafter define it, was never deemed a just cause of divorce by any of these tribunals. In 1759, the parliament of France refused the application of a female, whose husband had been declared impotent during his first marriage, on the principle, that at his second nuptials, several years after, the physicians declared that he appeared to be cured of his disease.*

The Napoleon code does not expressly declare that absolute and incurable impotence is a dissolving cause of marriage; but the course of legal proceedings under it leads to this conclusion. The court of appeals at Treves in 1808, in the case of a female, directed that she should be visited by medical men, who were to report to that tribunal, whether the supposed injury occurred before or after marriage, and whether it was remediable.†

The law of England, as laid down by Blackstone and his editor, is as follows: a total divorce is given whenever it is proved that corporeal imbecility existed before the marriage. In this case, the connexion is declared to have been null and void, *ab initio*. Imbecility may, however, arise after marriage; but it will not vacate it, because there was no fraud in the original contract,

* Foderé, vol. 1, p. 361. It will astonish those who have not attended to this subject, to learn that there was a period in French jurisprudence when actual congress was a judicial proof in cases of impotence. At first it was conducted in a private manner, but afterwards became shamelessly public. This prevailed from the thirteenth century until the year 1677, when it was solemnly abolished, in consequence, as it would seem, of the case of the Marquis De Langley. His wife declared him impotent; the congress was ordered, but without success; and his marriage was annulled in 1659. He married again, and had seven children. (*Dictionnaire des Sciences Médicales*, Art. *Congres*, by Marc. Mahon, vol. 1, p. 70.)

† Foderé, vol. 1, p. 362, 363. Devergie, and with him are several lawyers and physicians, is of opinion, that impotence is not a legal cause of divorce by the French code, and that the court have not the power to make the above decree. The intention of this omission, according to him, was to avoid a repetition of the scandalous scenes of former times. The article of the code 180, is at best equivocal. I give it in the original. "Lorsqu'il y a en erreur dans la personne, le mariage ne peut être attaqué que par celui des deux époux que a été induit en erreur." Devergie, vol. 1, p. 384.

and one of the ends of marriage, the procreation of children, may have been answered.*

There is, however, one case on record, which was decided on very different principles. I refer to that of the Earl of Essex, in the reign of James the First. His countess transferred her affections to the royal favourite, Viscount Rochester, (afterwards Earl of Somerset;) and being desirous of a divorce, complained that her husband was impotent. She deposed, that for the space of three years, they had lain together; and during that time, he had repeatedly attempted to have connexion with her, without success. She also stated that she was still a virgin; and several peeresses and matrons, who were directed to examine her, corroborated this statement, although it is mentioned that she substituted a young female of her own age and stature in her place during the examination. She was also pronounced to be well fitted for having children. The earl, in his answer, admitted his inability to know her; while he denies his impotence as to other females, and insinuates his belief of her incompetency for copulation. After the examination of numerous witnesses, objections were raised by Abbot, the archbishop of Canterbury, and one of the king's delegates on this trial, on the propriety of dissolving the marriage on such grounds: to which the king vouchsafed an angry reply. It was finally decided, by the vote of seven delegates, (five being absent, and not consenting,) that the marriage should be dissolved, and the parties allowed to contract new marriage ties.†

The causes of impotence have been variously divided by different writers; but I conceive that I shall be best enabled to give a comprehensive view of them, by adopting the arrangement of Foderé, into *absolute*, *curable*, and *accidental or temporary*.

* Blackstone's Commentaries, with notes by Christian, vol 1, p. 440.

† Hargrave's State Trials, vol. 1, p. 315. See also No. 1 in the Appendix to Vol. 8; being a narrative of the proceedings on the trial, drawn up by the Archbishop of Canterbury. In the speech which he intended to have delivered on giving his opinion, he relates the case of one Bury, tried in 1561. His wife cited him before the ecclesiastical court on the ground of impotence; and the physicians deposed that he had but one testicle, and that no larger than a bean. The want of access was also proved. A sentence of divorce accordingly passed. After some time, Bury married again, and had a son by his second wife. A question arose, after the lapse of some years, whether the offspring was legitimate; and it was decided that *the second marriage was utterly void*, because the ecclesiastical court had been deceived in the opinion they had given on the impotency of Bury. (Page 23 of the Appendix.)

We shall first notice those in the male.

The absolute causes of impotence, or those for which there is no known relief, principally originate in some mal-conformation or defect in the genital organs; and these may be either natural or artificial. To this class we refer the following—an absolute want of the penis. Cases are frequently met with in medical works, where it is stated that the ureters were found terminating in the perinæum, or above the os pubis. Foderé observes that he cured a young soldier of incontinence of urine, in whom there was a fleshy excrescence, like a button, in the place of the penis, and at which the ureters terminated: the testicles were well formed. Many cases are also on record of the penis being impervious.*

* A most valuable and learned essay on this subject may be found in the *Edin. Med. and Surg. Journal*, vol. 1, p. 43 and 132, entitled, "An attempt towards a systematic account of the appearances connected with that mal-conformation of the urinary organs, in which the ureters, instead of terminating in a perfect bladder, open externally on the surface of the abdomen—by Andrew Duncan, jun. M. D." See particularly Matthew Ussem's case, and page 54, on the genital organs of the male.

Dr. Duncan enumerates 49 cases, of which 41 are of the male and 8 of the female. The following may be added to his catalogue. 1, 2. Two cases by Dr. Maitland of Blackburn, (Lancashire.) In one, the ureters terminate in a fungoid tumour, at the lower part of the abdomen—testicles in each groin, penis an inch long and imperforate.—In the other, the ureters end in a tumour in the pubic region—penis imperforate—testicles natural. (*Edinburgh Med. and Surg. Journal*, vol. 25, p. 31.) 3. By Dr. Vernon, in a child—the usual tumour. (*Ibid.* vol. 27, p. 81.)

4. By Dr. Palmer of Lanesborough (Mass.) The child was living, aged two months in November, 1836. (*Boston Med. and Surg. Journal*, vol. 15, 377.) 5. A case quoted from the *Gazette Medicale* of May, 1835. Pierre L. Vallee aged 10 years. (*London Med. and Surg. Journal*, vol. 7, p. 534. 6. A case by Velpeau, in *Memoirs of the Royal Academy of Medicine*, vol. 3. *Edin. Med. and Surg. Journal*, vol. 48, p. 445.

Additional cases are given by Dr. Schmitt, of Wurzburg, in his essay on Congenital Deficiency of the Urinary Bladder. 1836. (*Amer. Journal Medical Sciences*, vol. 20, p. 183.)

There are three American cases which have been described and figured. One was seen at New-York, where the individual died in the State Prison in 1826, aged 52 years. There was a fleshy mass in the pubic region, and the ureters terminated in this. The penis was imperforate and about an inch long, the testicles large and well formed. The individual repeatedly stated that his venereal desires were violent. Plates of this case with descriptions are given by Drs. Ducachet and Charles Drake. (*Medical Recorder*, 3, 515, and *New York Med. and Phys. J.*, vol. 5, 443.) Another has been very recently described and figured by Dr. Hayward of Boston. This individual came into the Massachusetts General Hospital in June, 1832. He was a native of the State of Maine, aged 21, and in good health. There was an oval fungous tumour, six inches in circumference at the base, and projecting one inch and a quarter from the abdomen, directly over the ordinary place of the symphysis pubis. The ureters terminated in this, and the urine passed out in drops. The penis was short, only two inches long,—measuring five inches in circumference at its root, partly divided and united at the under surface only. The testes were perfect. He has sexual desire, and when under the influence of it, the penis becomes erect, and sometimes a discharge of seminal fluid takes place from the ureters. Dr.

In addition to this, have been enumerated, an amputation of the virile organ—a schirrous or paralytic state, induced by injury to the nerves or muscles of the parts—and an unnatural perforation of the penis, or in other words, the extremity of the canal of the urethra, terminating at some place other than its natural situation. When this happens on the upper part, it is styled *Epispadias*, when below, *Hypospadias*. We shall however see that it would be unsafe to consider all or most of these as absolute causes of impotence. Thus, Piazzoni relates a case where both the corpora cavernosa were destroyed, but as the canal of the urethra was preserved, the act could be performed.* So also with the varieties in the termination of the urethra. Belloc says that he knew a person at Agen, in whom the orifice was at the bottom of the frænum, and who had four children resembling their parent, and what is still more remarkable, two of them had the same mal-conformation. The possibility of impregnation may therefore depend on the distance to which the orifice is thrown back.†

Hayward states that one other case of this kind has come under his observation, but he had not an opportunity of examining him minutely. (Boston Med. Magazine, vol. 1, p. 91.)

The third occurred to Dr. Dunglison in Philadelphia, and is figured by Dr. Duffee. It resembles in most of its characters the cases above recorded. The individual was about eight years old, and dressed in female attire. (American Med. Intelligencer, vol. 1, p. 138.) Another case is mentioned by Dr. Pancoast. (Ibid. vol. 1, p. 147.)

* Paris' Med. Jurisprudence, vol. 1, 205. A case is related by Mr. Hurd in the London Med. and Surg. Journal, vol. 4, 323, in which the patient, after suffering severe disease, such as phagedenic inflammation, with the formation of excrescences, was relieved by complete amputation. There was only a very small protrusion of the organ on pressure, yet he had subsequent to this two children.

† Belloc, p. 50. I will mention in this place the cases I have noticed, and whether they were impotent or not.

Hypospadias,—a case is mentioned by Zacchias, fruitful.

Dr. Hosack—the same. (New York Med. and Phys. Journal, vol. 2, p. 12.)

Dr. Dewees—the same. (Coxe's Medical Museum, vol. 1, p. 165.)

Mr. Syme—the same. (Edinburgh Medical and Surgical Journal, 33, 243.)

Frank has seen a case transmitted through three generations. Kopp saw a peasant near Hanau with five children, in whom the opening was $11\frac{1}{2}$ lines from the extremity of the glans. (Dict. Des Sciences Med. vol. 23, Art. *Hypospadias*, where other cases are cited, also vol. 24, Art. *Impuissance*.)

The case of Dr. Schweikard in the same work, Art. *Hermaphrodisme*, doubtless belongs here. "At the root of the glans was an oval opening; this was the urethral orifice through which the urine passed. This man had several children." (Ibid vol. 21, p. 96.)

Dr. Gunther—two cases—fruitful. (London Medical Repository, vol. 25, p. 185.)

"I know an individual, the father of a very fine child, marked strongly with the paternal resemblance, and in this person, the urethra opens in the corpus spongiosum, between one or two inches from the glans." Dr. Blundell in Lancet N. S., vol. 2, p. 771.

The inability to propel the semen out of its vessels, is frequently to be considered as an absolute cause; but generally it is a curable one.* I mention it, however, in this place, for the purpose of stating, that in several instances of this nature, there have been found, after death, a diseased state of the prostate gland, or extensive strictures of the urethra.

The natural want of both testes, provided that ever occurs, or their artificial loss, is another cause. The removal of them by excision, and the frequency of this practice in some countries, is well understood. I may add, that there have been instances in which these organs have suddenly diminished and disappeared, as a consequence of disease or external injury.† The point, however, which excited most discussion in former times, was, whether individuals born without any appearance of testes, but who in other respects have the activity and strength that belong to the male sex, are to be considered impotent. It is generally believed not; since it has been well ascertained, that in many instances these organs have not descended from the abdomen, and yet the individual has exhibited every proof of virility.‡

For other cases, in persons below the age of puberty, see Edin. Med. and Surg. Journal, vol. 32, 246; Littel's Monthly J. Foreign Med, 1, 189.

London Med. Gazette, vol. 13, p. 878, a case of hypospadias, cured by Dupuytren.

On the same page is the notice of a case of epispadias, related by Dr. Cramer in Hecker's Journal.

* Morgagni declared a case, where the patient was thirty years old, and all the parts were properly formed, to be incurable. This opinion was founded on the idea that some of the internal organs were diseased. *Opuscula Miscellanea*, p. 34. *Responsum Medico-Legale super seminis emittendi Impotentia*.

† Foderé, vol. 1, p. 369. He observes, that he has witnessed several cases of this kind in deserters, condemned to labour on the canal at Arles. Larrey also states, that many soldiers of the army in Egypt were attacked with a similar complaint. The testes lost their sensibility, became soft, and diminished in size until they were no larger than a white French bean. No venereal disease had preceded these attacks. When both testes were affected with this atrophy, the patient became impotent—the beard grew thin, and the intellect weak. He attributes it to the use of the brandy of dates. Larrey, vol. 1, p. 260.

Severe blows, fractures, &c., on the back of the head would also seem to cause impotence, see case in Hennen's Military Surgery, 2nd edition, p. 303; also one from Hildanus, quoted in *Medico-Chirurgical Review*, 4, 969, and Larrey's *Clinique Chirurgicale* analysed in the same, vol. 19, p. 16.

“The reverse is sometimes the case—the patient being occasionally extremely salacious. In a case reported by Dr. Donne, of Louisville, Kentucky, in which the cerebellum was wounded by a musket ball, the individual laboured under constant priapism, until the very moment he expired.” Prof. Gross in *Western Journal Med. and Phys. Sciences*, vol. 10, p. 45.

‡ “During the examination of 10,800 recruits, I have found five in whom the right, and six in whom the left testicle was not apparent. In two of those cases, there was inguinal hernia at the side where the testicle had not descended. I have met with but one instance where both testicles had not descended.” Dr. Marshall's *Hints, &c.*, pages 83, 207.

Considerable attention should be directed to the external appearance of the person—his muscular system—the strength of his voice—the presence of the beard, &c. The medical examiner should also examine whether any cicatrix is to be found in the scrotum, indicating castration; or whether, in the room of the testes, there do not exist some hard knots or lumps, proving the existence of former disease. If these are wanting, and the general appearance is virile, we are not justified in considering the individual as impotent.

A different opinion, however, prevailed in former times. Pope Sixtus the Fifth declared, in 1587, in a letter to his nuncio in Spain, that all those who were destitute of them, should be unmarried; and Philip II. accordingly executed this order, which affected many in that kingdom. The parliament of Paris, also, in 1665, decreed that they should be apparent, in order to permit a person to contract marriage.* These, however, are the relics of barbarous ages. Unquestionable facts and anatomical examinations have proved that the conformation in question may be present, without injury to the generative power. Rolfinck relates the case of an individual distinguished for libertinism, who was executed for some crime. He was, after death, consigned to the dissecting knife; and on examination, the testes were found in the abdomen.† The parents of a young man in a similar situation, consulted the physician as to the propriety of allowing him to marry. He recommended it, and a numerous offspring demonstrated the propriety of his advice.‡

* Mahon, vol. 1, p. 55, 57.

† Mœbius, quoted by Mahon *ut antea*. It is stated by Bichat, on the authority of Roux, that very commonly among the inhabitants of Hungary, the testes do not descend till some months, or even years after birth. (Brewster's *Edinburgh Encyclopædia*, Art. *Anatomy*, vol. 1, p. 825.)

‡ Mahon, vol. 1, p. 55. Additional cases of fruitful marriages, under these circumstances, are mentioned by Dr. Geddings. (Chapman's *Journal*, N. S. vol. 4, p. 34.)

It is, however, proper to subjoin the remarks of Mr. Jas. Wilson on this subject. "When both testicles have remained in the cavity of the abdomen, it has been supposed by John Hunter that they are exceedingly imperfect, and incapable of performing their natural functions." He had met with two cases, one of which seemed to confirm this remark, while the other makes against it, although it does not altogether refute it. "The first is a young gentleman of very large fortune, now twenty-five years of age. He has some beard, and not an unmanly appearance; but although an imprudent, and in some respects a dissipated person, he has never shown the least desire for women, or disposition for sexual intercourse. The second is between thirty and forty years of age, who has one testicle forming a tumour within the ring; and the other, which descended at puberty, lying immediately on

I may also add, in this place, a cause of impotence, concerning which there has existed a considerable diversity of opinion; and that is, the loss of one of the testicles only. If this deprivation be compensated by the healthy size and condition of the other, we have no reason to dread the effects. This actually occurs in some cases of *cynanche parotidea*, where there has been a translocation of the complaint from the neck to the testes. Dr. Robert Hamilton, in one of the best histories which we have of that disease, mentions, that when it was epidemic at Norfolk in England, a patient was seized with swelling of both the testicles. One of them wasted away, until nothing but its coats was left. This occurred in 1762, and in 1769 he had a child, and in 1772 another; both of whom were healthy.* Mahon also mentions that he was acquainted with a young man, in whom one of these organs gradually diminished and withered away, whilst the other increased proportionably in size; and after this had taken place, he became the father of five children.† Sir Astley Cooper removed a testis for an enlargement and great hardness, in January, 1821. The wife, by whom he had already had one child, nursed the patient, and in March she proved pregnant.‡ If, however, the remaining testicle be small and extenuated, or have become scirrhus or carcinomatous, or even if the epididymis be tumefied and hard, we have just reason to dread the presence of impotence.

There also occasionally occur cases in which the smallness of the testicles throw doubts on their powers. Dr. Baillie knew a person of middle age, in whom their size did not exceed that of the extremity of the finger. This was congenital, and accompa-

the outside of it. He is a married man, and has children. Before his marriage, he describes himself as having great desire, and not being deficient in power. He formerly had a venereal gonorrhœa;” and it was from a swelling of the testicles, consequent on this, that Mr. Wilson came to witness his case. One testicle is of full natural size, and the other also appears to be so, as far as can be judged by feeling it through the tendon of the external oblique muscle. (Wilson’s *Lectures on the Urinary and Genital Organs*, p. 408.)

Mr. Lawrence has also seen two cases—in which the testes remained, and the individuals were impotent. On dissection, the body of the glans was not more than half its natural size; and the epididymis, which was very imperfect, did not join the body of the testes. In a third instance, however, it exactly resembled the last case of Mr. Wilson. It appears then, says Mr. Samuel Cooper, that more depends on the size and structure of these organs being natural, than upon their natural situation. (Note to Good’s *Study of Medicine*, vol. 5, p. 7.)

* Transactions of the Royal Society of Edinburgh, vol. 2. art. 9.

† Mahon, vol. 1, p. 52.

‡ Medico-Chirurgical Review, vol. 18, p. 389.

nied with a total want of sexual desire. Mr. Wilson, however, relates the following: "I was some years ago, consulted by a gentleman on the point of marriage, respecting the propriety of his entering into that state, as his penis and testicles very little exceeded in size those of a youth of eight years of age. He was 26, but had never felt desire, until he became acquainted with his present wife. Since that, he had experienced repeated erections, with nocturnal emissions. He married, became the father of a family, and those parts which at 26 were so small, at 28, had increased to the usual size of those of an adult man.*

A question, connected with the subject under consideration, was agitated some years since, in Germany. It was, whether a person castrated after he arrives at the age of puberty, is capable of impregnating, for some days after the operation. Marc, a high authority in all such cases, supposed that he must be deemed impotent, as the time needed for curing the wound, is sufficient to carry the semen into the blood, and even if capable of two or three emissions, yet he would afterwards be impotent. Orfila states it, as his opinion, that there may be temporary power in such cases, where the extirpated testicles are healthy, but not if tuberculous or schirrous.† Sir Astley Cooper, in his recent work on the structure and diseases of the testis, gives a very apposite case:—

He performed the second operation of castration in 1801, on a person, for chronic abscess in the testis. On visiting him four days after, he informed Sir A. C. that he had, during the last night, an emission. He was a married man previous to the first operation. For nearly the first twelve months after the complete castration, he stated that he had emissions *in coitu*, or that he had the sensations of emission. After that, he had erections and coitus, at distant intervals, but without the sensation of emission. After two years, he had erections very rarely and very imperfectly; and ten years after the operation, he said he had, during the past year, been once connected. In 1829, Sir A. C. saw him, as a patient. The erections were very seldom, and very imperfect, and the penis was shrivelled and wasted.‡

* Lectures, p. 424.

† Orfila's *Leçons*, vol. 1, p. 127.

‡ *Medico-Chirurgical Review*, vol. 18, p. 390. Sedillot mentions that he has heard Boyer relate the case of a man from whom both testicles had been successively re-

To the above, Foderé adds the following, which may possibly in some cases produce the consequence in question, viz. congenital tumours of a large size; such, for example, as scrotal hernia. This, he supposes, may produce a hardness of the parts, and prevent a secretion of the seminal fluid, by its continued pressure on the spermatic vessels.* The medical college of Western Prussia, declared a voluminous and irreducible hernia, a sufficient cause of divorce.†

Among the curable causes of impotence may be enumerated the following: An atony of the parts, arising sometimes from local disease or external injury, and at others from masturbation—a retraction of the penis, originating from stone in the bladder, or some other urinary diseases; a natural phymosis, which sometimes confines the glans in such a manner as to prevent the emission of semen;‡ obliteration of the canal of the urethra, from stricture or other causes;§ and lastly, the malconformation, of which we have spoken, as to the place of the aperture of the urethral canal. All these have been successfully obviated by modern surgery.||

removed, on account of sarcocele. After the second operation his wife became pregnant. He consulted Boyer, who told him that the child was no doubt his own, but that it would be his last. P. 17.

Similar results have occurred with animals recently castrated. American Med. Intelligencer, vol. 1, pp. 146, 244.

* Foderé, vol. 1, p. 373. "In Italy, double hernia by pressing on the spermatic chords, sometimes causes as complete emasculation as if the testicles were actually removed; so that many of the fine singers of that country are so by the visitation of God." DUNLOP.

We should not forget that extreme youth is an absolute cause. It has been decided, as far back as the reign of Henry the 6th in England, that the issue was a bastard, when the husband was within the age of fourteen. See *The King v. Luffe*, 8th, East's Reports, p. 205.

† Metzger, p. 494. The following is also an incurable cause, but not discoverable until after death. "A malformation of the epididymis—instead of passing on to the vas deferens, that tube has terminated in a cul-de-sac. I have preserved one of this kind in the collection of Windmill street." Wilson's Lectures, p. 423.

‡ Observations on Natural Phymosis and its effects, by Dr. Houston, in Edin. Med. and Surg. Journal, vol. 38, p. 266.

In Sir George Lee's Ecclesiastical Reports, in a case (*Welde v. Welde*, 1731,) where the husband pleaded capacity, in answer to a charge of impotency, and one Williams, a surgeon, swore that Mr. Welde had an external impediment, arising from the shortness of his frænum, which prevented an erection, but that it was now removed, he having cut the same, and that he believed he was now capable. (Reports, appendix, vol. 2, p. 580.)

§ Cases of this description will be found in Edin. Med. and Surg. Journal, vol. 21, p. 315, by Mr. Maclure of Glasgow—Medico-Chirurgical Transactions, vol. 12, by Mr. Arnott.

|| Bushe's Medico-Chirurgical Bulletin, vol. 2, p. 1. The Editor gives several cases of hypospadias successfully treated. I subjoin the following uncommon case,

"Ossification or a cartilaginous condition of the septum of the penis, may become a cause of temporary or incurable impotence, by preventing copulation. A case of this kind once occurred to Dr. McClellan, of Philadelphia. The individual, already considerably advanced in life, but with sexual powers unusually vigorous, was unable to cohabit, in consequence of the virile organ being so much arched towards the perineum, as to render it impracticable, to introduce it into the vagina. On making an incision along the dorsal surface of the penis, the pectiniform septum was found to be converted into a plate of cartilage, the removal of which was soon followed by a complete restoration of the functions of the organ."*

The third class of causes, the accidental or temporary ones, is the most important, since they are frequently the subject of legal investigation. They are those which affect an individual during his marriage, and of course, have to be considered in cases of contested paternity.† The law presumes, that the husband is the father of every child conceived during the term of wedlock, yet it allows an investigation as to the chastity of the female. That such is law in our own and other countries, the following extract will prove: "In the case of Lomax versus Holmden, tried before the court of King's bench in England, the question at the trial was, whether the plaintiff was the son and heir of Caleb Lomax, Esq. deceased, and this depended on the question of his mother's marriage. And that being fully

as an illustration of the trophies of modern surgery. In 1830, a patient aged 26 was admitted into the Edin. Infirmary, under the care of Mr. Liston. The whole extent of the urethra anterior to the pubes was exposed superiorly, there being a wide fissure through the corpora cavernosa and glans. The penis was retracted considerably, so that the posterior part of the fissure lay behind the symphysis pubis. When he urinated, the urine after emerging from beneath the symphysis, divided into numerous streams, some of which spread over the sides of the penis, whilst others passed along the exposed urethra. This malconformation was congenital, and he was impotent. It was remedied by paring off the callous edges of the margin of the fissure, introducing a catheter and uniting the edges by sutures. The penis obtained its natural appearance. *London Med. Gazette*, vol. 6, p. 252.

* Dr. Gross in *Western Journal Med. and Phys. Sciences*, vol. 10, p. 46.

† I may mention in this place, a rare case given by Mr. Callaway, of an individual, who, returning home intoxicated, had several connexions with his wife during the night. The penis continued in a state of permanent erection after this for sixteen days, resisting all medical and surgical means. An incision with a lancet at the end of this time, produced a copious discharge of dark, grumous blood, and a solution of the erection. The individual is impotent, most probably occasioned, says Mr. C. "by a deposition of coagulable lymph in the cells of the corpora cavernosa, preventing the admission of blood, and consequent distention of the organ." *London Med. Repository*, vol. 21, 286.

proved, and evidence given of the husband's being frequently at London, where the mother lived, access was of course presumed. The defendants were then admitted to give evidence of his inability from a bad habit of body. But their evidence, *not going to an impossibility, but an improbability only*, this was not thought sufficient, and there was a verdict for the plaintiff.*

The proofs of bastardy may be thus, 1. impotence, and 2. proof of non-access, so conclusive, that it is *impossible* that the husband could have been the father of the child. This subject, in all its bearings, has of late years been minutely canvassed, in consequence of what is usually styled the Banbury peerage case. Lord Banbury died in 1632, aged 85. In 1627, Lady B. had a son, and in 1630, another. They both lived at the house of Lord Vaux, with whom it was said, she was in habits of adultery. In an inquisition held after his death, it was held that he died without heirs male of his body. The son claimed the title in 1646, and his descendants also, from time to time, but the House of Lords either passed resolutions denying the claim, or had no proceedings. In 1806, the lineal descendant of the son succeeded in bringing it to a solemn adjudication. Lord Erskine advocated his cause, and quoted the case of Sir Stephen Fox, who was married at 77 and had four children, the last, when he was 81. Lord Banbury was proved to have been hale and hearty at the time of his death. The house, however, decided in 1813, that the claim had not been made out. The author, from whom I draw this narrative, observes, that the *concealment* (which was the fact in this case) under circumstances which could leave no doubt that the adultery was the *cause* of it, appears to have formed the point on which the decision was grounded.†

The French or Napoleon code, although it does not permit a husband to disavow his child, by alleging his *natural impotence*,

* Strange's Reports, vol. 2, p. 940. I am indebted to Dr. Male for the reference to this case.

† Edinburgh Review, vol. 49, p. 190, an elaborate article on the law of legitimacy. See also London Law Magazine, vol. 4, p. 32; also Head v. Head. (1 Simons and Stuart, 150) in Peters' Condensed Chancery Reports, vol. 1, where the answers of the Judges in the Banbury cause are given. The same case, before Lord Eldon, in 1 Turner and Russell's Reports, 138. Le Marchant's Report of the Gardner Peerage case, Appendix, p. 389. On the subject of non-access, the following American cases may be quoted, Commonwealth v. Stricker; 1 Browne's Pennsylvania Reports, app. p. 47; Commonwealth v. Shepherd, 6 Binney's Pennsylvania Reports, 283; 2 Paige's Chancery Reports, 130, Cross v. Cross.

yet contains a regulation, which, in its effects, operates similarly to the principles contained in the English case above quoted. The 312th article says, that the infant conceived during marriage, has the husband for its father, but he may notwithstanding disavow it, if he can prove, that from the 300th to the 180th day before its birth, there was, either on account of absence, or *from the effect of some accident*, a physical impossibility of cohabiting with his wife.*

In discussing this subject, it will readily occur, that there is a class of diseases, during the progress of which, virility may be preserved; while there is another in which it is destroyed. It is not possible, nor indeed would it be proper, to state these except in a general way; since it is difficult to foresee what may hereafter be adduced in contested cases, as a cause of impotence. We shall therefore be understood to mention the diseases, as causing a probability on one or the other side, and not as positive proof.

The diseases that are considered compatible with connexion, are those which do not affect the head and sensitive system primarily, and are not accompanied with great debility. Inflammatory and catarrhal fevers are of this class. So also in asthma and the early stages of phthisis pulmonalis, the power is preserved.† Some diseases appear to stimulate the generative organs; and others, although accompanied with pain, are said to excite desire. Of the first, may be named a calculus in the kidneys or bladder; and to the last belong gout and rheumatism.‡

* Foderé, vol. 1, p. 375. "In Scotland it is only necessary that a man should be in a situation, where a possibility exists of his cohabiting with his wife, in order to constitute him the father of her children, or as the law correctly and beautifully expresses it, within the four seas of the realm. There is a case at issue in the Court of Session at this moment, where a Miss McNeil, an heiress, is claimed by two husbands. The one asserts that he married many years ago and cohabited with her, one night only; the other married her since and has by her a family; but it seems to be the general opinion that if the first husband proves her to be his wife, the children must be his as a matter of course." DUNLOP.

This case was decided, I believe, as Dr. Dunlop supposed it would be, in favour of the first husband. See, McNeil, or Jolly, v. McGregor, 1825, cases in the Court of Session. Vol. 4, p. 259.

† Orfila's Leçons, vol. 1, p. 136. Louis, a late writer on consumption, denies the truth of this opinion, so far as to limit it only to the earliest periods. In more advanced stages, he is convinced that it decreases with declining strength. The Editor of the London Medical Repository (vol. 25, p. 106,) remarks on this: "We have no doubt, that in some examples of phthisis, both the propensity and the power to gratify it, have existed up to the very day of the patient's death."

‡ "A friend of mine, who studied in the hospital of New York, informed me, that

A man named Aurelius Lingius, aged sixty years, had been affected, during the two last years of his life, with occasional attacks of fever, accompanied with gouty pains, which at intervals made him extremely ill. For the space of two months, however, he appeared on the recovery; when, being seized with a fever and ague, he died. His wife declared herself pregnant, and six months after his death, was delivered of a healthy child. Its legitimacy was contested, on the ground that the husband, before his last illness, had been incapable; and this opinion was corroborated by his own confession to the physicians attending him. His wife allowed the truth of this statement, but asserted that his powers had returned some time before his disease. In this state of the case, Zacchias was consulted; and he decided in favour of the chastity of the wife, for the following reasons: Aurelius had been twice married, and by each wife has had several children. The disease under which he laboured was a heating one, and his powers were probably perfect during the period of convalescence. His age does not prevent the possibility of his producing pregnancy in the female. Symptoms of this were present during his lifetime; and although he was known to be extremely jealous, yet his affection remained undiminished towards her. And finally, the intervals of ease that accompany articular pains, together with the fact that she always reposed in the same bed with him, were, in the mind of Zacchias, conclusive arguments. The judges decided in favour of the female.*

In connection with the facts already stated, it may be proper to add a circumstance suggested by the author just quoted. He deems it possible that certain diseases may so change the state of the system, as to produce an alteration in the generative power. He quotes the testimony of Avenzoar, who had no children during the whole period of youth, but became a father shortly after recovering from a violent fever. And also the case, which came under his own observation, of an artificer, who lived twenty-four years with his wife without issue: shortly after his convalescence from illness, he became a father, and afterwards had many children.†

after recovering from the yellow fever, the patients displayed most furious sexual passion, to the great inconvenience of the nurses and other female attendants."

DUNLOP.

* Zacchias, *Quest. Med. Leg. Consilium*, 23. † Zacchias, vol. 1, p. 271.

The diseases which we may rationally suppose will prevent cohabitation, are the following: A mutilation, or severe wounds of the sexual organs—carcinoma of the testicles or penis—gangrene of the lower extremities—immoderate evacuations of blood or bile, or of the fæces—scorbutic cachexia—marasmus—peripneumony and hydrothorax—anasarca in its perfect state, particularly if accompanied with an infiltration into the sexual organs—nervous and malignant fevers, particularly if they affect the brain, and are accompanied with great debility and loss of memory—all affections of the head and spinal marrow, whether from a fall, blow, wound or poison;* or from internal causes, as apoplexy, palsy, or other comatose diseases. If the infant is conceived whilst the husband has been known to have laboured under either of these maladies, the presumption is certainly against its legitimacy. So also, if he be affected with leprosy, venereal ozæna, severe cutaneous diseases, or insanity, we may reasonably doubt the fact of cohabitation, from the fear that we may suppose the female has experienced, lest she should be contaminated, or from the dread that she has entertained of having communication with the individual.†

We come now to the consideration of impotence in the female. And here it is to be observed, that even if the causes of it be removed, yet sterility, or an inability to conceive, may still exist. It will, therefore, be proper to notice the causes of impotence and sterility in succession. They may each be divided into incurable and curable.

The incurable causes of impotence are, 1. An obliteration or thickening of the sexual organs, so as to prevent any introduction.

The vagina and womb have thus been found closed with a dense fleshy substance. Morgagni mentions cases in which there was a continuity of parts, without any aperture. A recent case related by Dr. Mott, as occurring in this country, deserves to be mentioned in detail. The individual was aged 23, and had

* Foderé mentions the case of a person, aged forty, who laboured under temporary impotence during the space of six months, from exposure to charcoal vapours. This state of the system was left after the recovery from the immediate danger. Vol. 1, p. 382.

† I have not noticed the *moral* causes of impotence, which involve the inquiry as to the *influence of the mind on the generative function*, because I can hardly suppose how any proof on this point can be brought before a court of justice. It is however unquestionable that they may exist, through the influence of the imagination, the fear of incompetency, dislike of the individual, &c. The "Evil Eye" of the Greeks is an apt illustration.

been married upwards of two years. Her health was extremely good, but she had not seen the least indication of the menses. About every twenty-eight days, she feels some slight uneasiness about the pelvis, which is followed for a day or two by an active diarrhœa. This occurrence she has noticed, since about the age of seventeen or eighteen.

As no connexion could be effected by her husband, she at length consented to an examination. The external parts were fully formed, but no vagina could be discovered. On a plane with the meatus urinarius, or about the situation of the hymen, there is a complete septum or partition. It has a firm appearance, though it yields somewhat to the finger. There is not the least opening into it in any part. Imagining that it might possibly be an imperforated hymen, Dr. Mott made an incision into it about an inch in depth—but without success. After this closed, he made a second attempt, until he had proceeded between two and three inches. No marks of a vagina could however be discovered. Dr. Mott is of opinion that both vagina and uterus are wanting. She has never experienced the least sexual desire.*

Foderé also relates the following case from the *Causes Célèbres*. In 1722, a young woman aged twenty-five, in good health, was married at Paris. Six years elapsed without consummating the nuptials; at the end of which she consented to be visited by a midwife. This person declared that she could find none of the sexual organs, and that their place was occupied by a solid body. The female stated at this time, that though in good

* New-York Med. and Phys. Journal, vol. 2, p. 19. A case probably of the same nature, is mentioned in the Lond. Med. Repository, vol. 8, p. 347.

Other cases are referred to in Davis' Obstetric Medicine, p. 112. "Richerand mentions a similar case, in which nature was periodically relieved by a discharge of bloody urine." DUNLOP.

Dr. Lee (Cyclop. Pract. Med., Art. Diseases of the Ovaria,) states the following as communicated to him by Prof. Elliotson. A young married female had never menstruated, yet had violent pains every month. Connexion went on, yet with severe pain. On examination, which was finally consented to, no vagina could be discovered, "the part, on opening the labia being as flat as the palm of my hand." Mr. Cline attempted twice to remove the difficulty by an operation, within the labia, but without success. It is justly supposed that the uterus was here wanting, but from the appearance of the breasts and other circumstances, that the ovaria had been fully developed.

Such was actually found to be the case in an instance of *imperforate* vagina, (as it is called, but where that organ was found closed by a thick, muscular-looking substance,) operated on by Dr. Macfarlane, of Glasgow. The patient died, and on dissection, no uterus was found, but the ovaries were large and well formed. In this female, the breasts were fully developed. Medico-Chirurgical Review, vol. 22, p. 450.

health, she had never been subject to the menses. A surgeon named Dejours was afterwards called in; and on examination, he supposed that an incision into this solid mass might remedy the inconvenience; and he accordingly performed it in 1734, but without success; as after cutting down two inches, he still found the mass in equal quantity, and the hope of its being a superficial obstruction was destroyed. He contented himself with keeping the wound open, and an aperture was thus preserved. In the year 1742, the husband applied to the court to annul the marriage. Levret and Saumet, on being consulted, stated that they had found an aperture of two or three inches in length; that the cicatrix of the former operation still remained; and that either through fear, or the prudence of the surgeon, it had not been sufficiently extensive to remove the obstacles. Ferrin, Petit, and Morand, on the other hand, deposed, that the operation had been properly performed, and that it was not probable that the parts necessary for generation had ever been present, either before or after marriage. The court, however, refused to annul the connexion, from an idea that a cure was practicable. The female died at Lyons about ten years after; and on dissection, the vagina and uterus were found to constitute one solid mass, without any cavity in either.*

In other cases the vagina is entirely wanting, and yet on dissection or by operations during life, the uterus is found present. Thus, in one by M. Villaume, the hymen was present, but there was merely a mass of cellular tissue in the place of the vagina, and by an operation, an opening was made to the uterus.† In another, by Dr. Moulon of Trieste, there was no exterior trace of the external organs, but on dissection, the uterus with its appendages, were seen of their natural size and well formed.‡ Profes-

* Foderé, vol. 1, p. 385. Still more remarkable cases are on record. In the article *Cas rares*, in the Dictionnaire des Sciences Médicales, vol. 4, p. 166, it is asserted on the authority of Hufeland, that the body of a child three years old was lately opened at Berlin, in which there was not the slightest trace, either externally or internally, of any part of the genital organs peculiar to either sex. (Medico-Chirurgical Review, vol. 4, p. 300.) Another resembling the above, and occurring in a girl fourteen years old, is quoted from the Journal de Médecine, in the American Journal of the Medical Sciences, vol. 2, p. 412. This individual enjoys good health.

† Littel's Monthly Jour. of For. Medicine, vol. 1, p. 376, from Archives Générales.

‡ American Journal of Medical Sciences, vol. 2, p. 193, from Journal de Progres. Sometimes the vagina is found ending in a *cul de sac*, as in case of Agatha Mélassene, who died, aged 27, at the Hotel Dieu in 1823. The external organs were well formed, and the breasts full; yet on dissection, no uterus could be found, but the broad ligaments were present, containing in their folds the fallopian tubes and well

sor Warren of Boston recently operated in a case, where the vagina was wanting, although the aperture of the urethra was well formed, and the clitoris and nymphæ appeared as usual. The female was 23 years old. The breasts were natural. No uterus could be discovered on examination. The operation ended favourably, a sanguineous discharge resembling the catamenia occurred, and Dr. Hayward supposed that he could distinguish something like an uterus.*

2. Another cause, (as assigned by systematic writers,) both of impotence and sterility, is a natural or fistulous communication of the vagina with the bladder or rectum. Foderé mentions cases of this nature, where the female menstruated by the rectum, and every possible remedy failed of success. There are, however, exceptions to this; since we have accounts of impregnation in one or two instances, and where delivery was affected by the malformed passages. Louis' famous case was of this description. The thesis that he wrote on this subject, "*In uxore sic disposita, uti fas sit, vel non? judicent theologi morales:*" was made the subject of a prosecution by the Parliament of Paris, and the Doctors of the Sorbonne interdicted him from addressing the casuists. The Pope, however allowed him to publish it in 1754.†

3. A prolapsus or retroversion of the uterus, or a prolapsus of the vagina. These are of course curable during their first stages; but instances have occurred where they are of long standing, and cannot be reduced, since the introduction of the fingers causes the most vivid pain.‡

4. A cancer of the vagina or uterus, from the pain that accompanies it, may be considered as an absolute cause.§ With-

developed ovaries. (Littel's Journal of Foreign Medicine, vol. 1, p. 114.) A small orifice leading to the bladder, unaccompanied with a vagina, occurred at Mr. Syme's Edinburgh Surgical Hospital. (Edinburgh Med. and Surg. Journal, vol. 37, p. 337.)

* American Journal of Medical Science, vol. 13, p. 79. A similar case is related by Mr. Edwards, in the Edinburgh Medical and Surgical Journal, vol. 41, p. 403. The editor, in commenting on this, remarks that cases of congenital deficiency of the vagina are very rare, and quotes three, from Meyer, Oberteuffer, and Howship.

† Medico-Chirurgical Review, vol. 5, p. 229. A late case of the same nature occurred to Prof. Rossi in Piedmont. (Dictionnaire des Sciences Médicales, vol. 24, Art. *Impuissance*.) Two other cases are related by Davis, (Obstetric Medicine, p. 121,) on the authority of Puzos and Portal.

‡ Pregnancy is however possible, even with an external prolapsus of the uterus. See cases quoted in the Cyclopædia of Practical Medicine, vol. 3, p. 493.

Mr. Guillemot has collected "from various sources, nine cases of the kind, the first two of which are particularly remarkable, as examples of gestation accomplished where the prolapse was complete." Montgomery, Signs of Pregnancy, p. 194.

§ In the New England Journal, vol. 9, p. 161, is a case by M. Lassere, which evidently proves the position in the text.

out this, however, it would seem to be incompatible with impregnation. Dr. Beatty of Dublin had a pregnant female labouring under the disease, and Dr. F. H. Ramsbotham observes in his lectures, that in one case at least, which he attended, he had an opportunity of knowing that the disease existed before impregnation.*

5. Extreme brevity of the vagina (congenital) would seem to be occasionally an incurable cause, so far as relates to the pain caused by connexion, although possibly it may not be accompanied with sterility. Dr. Gooch says that he once met with a case of this kind, and relates that Dr. Hunter was consulted by a lady in a mask, labouring under this. He told her that she was the most unfortunate partner that a man could have, as there was no cure.† Dr. Dewees appears to have met with two cases—in one, the whole distance to which the finger could be passed, did not exceed one inch or an inch and a half; in the other it was apparently connected with an absence of the uterus, as the vagina terminated in a cul de sac. This female had never menstruated; yet she had all the marks of womanhood, and enjoyed sexual intercourse.‡

The curable causes are, 1. A dense substance covering the orifice of the vagina. Paré, Ruysch, Fabricius, and many others relate cases of this kind; in some of which the membrane, which is generally the hymen, was so strong that the menstrual blood was accumulated behind it in large quantities. Foderé quotes a case from Fabricius, where the husband demanded a dissolution of the marriage, from the impossibility of having perfect connexion. The female, however, declared herself pregnant; and by an incision into the membrane, the obstacle was removed, and the pregnancy completed at the time indicated.§ Dr. Physick is also stated to have operated with success in a case where the vagina was entirely closed up to a considerable distance within the os externum.||

* London Med. Gazette, vol. 16, p. 466.

† Gooch's Midwifery, p. 45.

‡ Dewees on the Diseases of Females.

§ Foderé, vol. 1, p. 389. I shall notice this more in detail in the Chapter on Rape.

|| Dorsey's Surgery, vol. 2, p. 368. A remarkable case of a married woman, in whom the fossa magna were closed up to the orifice of the uterus, is quoted from Fletcher's Medico-Chirurgical Notes and Illustrations. She was relieved by an operation. A passage had, however, previously been effected into the bladder by the urethra, which was greatly enlarged. (Lancet, N. S. vol. 8, p. 613.)

Dr. Coste, of Marseilles, gives a case where the imperforate vagina was covered

2. An extreme narrowness of the vagina. Should pregnancy intervene, no apprehension needs be entertained of the result in this case, as it has been repeatedly observed that a dilatation gradually takes place before the period of delivery. It may be remarked, however, that this occurs more readily in young females, than in those of advanced years.*

Sometimes, however, there is a degree of irritability combined with the narrowness, as to cause extreme pain and fainting, on attempting coition. Dr. A. T. Thomson mentions an instance of this nature, where he and Sir Charles M. Clarke, in consultation, attempted every means to allay it and dilate, but without success.

3. Independent of the natural narrowness just mentioned, there is a similar affection that occasionally originates from accidental causes; such as tumours and callosities, cicatrices remaining after the cure of ulcers, or from lacerations after difficult labour.†

with an integument. The clitoris was greatly enlarged. The malconformation was removed by an operation. *Medico-Chirurgical Review*, vol. 29, 526.

* Dr. Davis mentions a case in which the narrowness returned after the first delivery, and was only completely relieved after the second birth. *Obstetric Medicine*, p. 102. See also the subsequent pages of his work for additional cases. M. Amusat lately removed a congenital occlusion of the vagina, in a female fifteen years of age, and brought from Germany, by gradual dilatation with a blunt instrument. There was nothing now to prevent conception, but from the state of the parts, he considered the danger imminent, should gestation occur. *Medico-Chirurgical Review*, vol. 29, p. 522.

† These are so numerous and various, that I will only refer to some of the more remarkable :

Davis's *Obstetric Medicine*, p. 116 to 120.

On obliteration of the vagina, by Cæsar Hawkins. (*London Medical Gazette*.)

Cyclopedia of Practical Medicine, vol. 2, p. 601, Art. *Impotence*, by Dr. Beatty.

Dr. Williams in the *American Journal of Medical Sciences*, vol. 11, p. 408. He refers to several cases.—Dr. Hoillemin in the same, vol. 15, p. 407.

A case by Dr. Barret of Kentucky, where death followed from rupture of the uterus in a second delivery, having been maltreated in the first. On examination, there was found a complete adhesion of the vagina, leaving only a septum of one or two lines at the lowest part. Through this, impregnation must have been effected. (*Drake's Western Medical and Physical Journal*, vol. 3, p. 206.)

A case also by Prof. McNaughton, in the *New York Medical and Physical Journal*, vol. 6, p. 252.

A case by Dr. Stedman, in the *Edinburgh Medical and Surgical Journal*, vol. 37, p. 26.—By Dr. Turnbull, in *ibid.* vol. 39, p. 128.

By Mr. Ingleby, in *do.* vol. 45, p. 111.

Dr. Fish, in *Boston Med. and Surg. Journal*, vol. 15, p. 268.

A case related by Dr. White of St. Louis. Here (1833) a high state of inflammation of the mucous membrane of the vagina, and adhesion of its parietes were induced by a steam doctor, who injected by *mistake*, some seven or eight times, an infusion of red pepper, into the *vagina*, instead of the *rectum*. This heroic remedy was used to prevent an attack of cholera. Dr. White was obliged to make an extensive incision. *Baltimore Med. and Surg. Journal*, vol. 2, p. 314.

A case by Professor Mussey, *Amer. Journal Med. Sciences*, vol. 21, p. 383.

In the *Medico-Chirurgical Transactions*, vol. 11, p. 445, a case is related of a ne-

A dilatation of these may be made according to the rules of modern surgery.*

4. We may add long continued hæmorrhage, recent prolapsus of the uterus or vagina, and even protracted fluor albus, to the above. They prevent connexion from the pain that occurs, or the diseased state that is present.

5. Mr. Ingleby suggests an additional cause in a protrusion of the bladder into the vagina. He has met with one case of this description, where this impediment arose several years after marriage.†

The causes of sterility, of an incurable nature, and sensible to the sight or touch during life, may be stated thus: A schirrous or cartilaginous uterus; stricture in the cavity of that organ;‡ a polypus in the interior of the uterus; enlarged and schirrous ovaria. The want of the uterus, should that occur, is seldom positively known till after death.§

gress in Jamaica, in whom there was a complete adhesion of the labia; and she asserted that it was owing to an operation performed in Africa, for the purpose of preserving the chastity of the female. This appears indeed to have been an ancient custom, as it is mentioned by Strabo. That it is the practice, is proved by the observations of Burckhardt, who says that the daughters of the Arabs, Ababde and Djaafeere, who are of Arabian origin, and who inhabit the western banks of the Nile from Thebes as high as the cataracts, and generally those of all the people to the south of Kenne and Esne, as far as Sennaar, undergo excision of the clitoris at the age of from three to six years. The healing of the wound is contrived to close the parts, except at one place for the passage of the urine and menses; and the adhesions are not broken through until the day before marriage, and in the presence of the intended bridegroom. Some have the parts sown up, and, like eunuchs, become more valuable on account of their unfitness for sexual connexion. (Elliotson's Blumenbach, p. 456.) See also Browne and Legh's Travels.

* Dupuytren, in his Essay on Laceration of the Perineum during Labour, mentions two cases, which I extract, for the purpose of caution to the medical jurist. He delivered a young woman secretly. The perineum was ruptured; but by the use of the suture, it again united. Several years afterwards, a man and woman visited him. The husband was unable to consummate his marriage. On examination, the aperture of the vagina was found very narrow, and a cicatrix was on the perineum. It was his old patient. He advised patience; and in a short time the female became pregnant, and was safely delivered.—In a parallel case, the husband deemed it a most unequivocal proof of previous purity. (London Medical Gazette, vol. 11, p. 128.)

† Edin. Med. and Surg. Journal, vol. 44, p. 432.

‡ Baillie's Morbid Anatomy, p. 371. "Slight inflammation (he observes) may induce this, and the obliteration particularly occurs in that part where the cavity is narrowest."

§ Memoirs of the Medical Society of London, vol. 4, p. 94. See also Burns' Midwifery, chapter 4, note 47 for references—Morgagni, letter 46; and Cooke's edition of the same, vol. 2, p. 450. A case by Dr. Stein of Berlin, illustrates the variety of external conformation that occurs. She was married, aged 24, well formed, slender, and delicate, with full breasts. The vagina was imperforate and on operating, nothing but a mass of cellular tissue could be found. She had never menstruated. Dr. Stein supposes, with probability, that the uterus is wanting and infers that it is the *ovaria* and not the *uterus* which, by their influence, give to the female her cha-

The causes which may be curable, are, obliquity in the position of the uterus; too great irritability of that organ; excessive menstruation; leucorrhœa; retention of the menses.* This last, however, is not by any means a certain cause of sterility, as women have become pregnant without the menses ever occurring.†

We should readily suppose that an imperforate uterus must be productive of sterility, were not an opposite case related on the highest authority. A female in London, in labour with her first child, (November, 1836) was found by Mr. Tweedie, the reporter,

racteristics. *Annals of Philosophy*, vol. 16, p. 114. This last opinion is corroborated by known facts, such as the case of Mr. Pears, in the *Philos. Trans.* for 1805. The woman died at the age of twenty-nine. Her stature was about four feet six inches, having ceased to grow at ten years of age. She never menstruated; her breasts and nipples never enlarged more than in the male subject; there was no appearance of hair on the pubes, and she never showed any passion for the male sex. On dissection, the os tincæ and uterus were found of the usual form, but they had never increased beyond their size in the infant state; the passage into the uterus through the cervix, was oblique; the cavity of the uterus of the common shape, and the fallopian tubes were pervious to the fimbriæ; the coats of the uterus were membranous; *and the ovaria were so indistinct, as rather to show the rudiments which ought to have formed them, than any part of their natural structure.* *Edin. Med. and Surg. Journal*, vol. 3, p. 105. Mr. Pott removed the ovaria in a case of inguinal hernia, by a surgical operation. (*Works*, vol. 2, p. 210.) Before this period, the female (aged twenty-three) was stout, large-breasted, and menstruated regularly; afterwards, although she enjoyed good health, she became thinner, her breasts were gone, and she never menstruated.

Additional cases of the absence or imperfect state of the uterus or ovaria may be found in the *London Med. Repository*, vol. 26, p. 78, by Dr. Renauldin; *Lancet*, N. S. vol. 10, p. 624, by Dr. Macfarlane; *Davis's Obstetric Medicine*, p. 513; *Andral's Pathological Anatomy*, vol. 2, p. 414; *Gooch's Midwifery*, p. 8. By Dr. Albers (from *Kleinert's Repertorium*, September, 1835.) This case was examined after death, which occurred at the age of 47. *Lancet*, N. S. vol. 17, p. 570. Other recent cases are referred to. A case of a female aged 19, in the *Birmingham Infirmary*, August, 1835. The uterus was wanting, and there was no trace of a vagina, but the ovaries were of the natural size, and the breasts were small, but decidedly formed. *Transactions Provincial Med. and Surg. Association*, vol. 3, p. 399.

* Fodere and Mahon mention dropsy (hydatids) and tympany of the womb, as causes. Denman, however, observes, that according to his experience, they have not prevented conception. (Denman, p. 148 and 149.)

† I have already referred to Dr. Duncan's Essay; and will only add, that it contains a notice of mal-conformations in the genital organs of both sexes, as connected with deficiency of the urinary bladder. Copious references are given to all preceding cases on record. See *Edin. Med. and Surg. Journal*, vol. 1, p. 132. Additional cases of female mal-conformations are also contained in *Edin. Med. and Surg. Journal*, vol. 1, p. 39, by Mr. Coates, vol. 1, p. 128, by Astley Cooper, Esq.; and vol. 7, p. 23, by Mr. Conquest; in *London Med. Gazette*, vol. 10, p. 8, by Mr. Earle. This last writer observes, that there are but seven or eight recorded cases of such mal-conformations in the female, while there are at least sixty related of its occurrence in the male. It is not incompatible with impregnation. See the case of the Cornish woman, by Dr. Huxham, *Phil. Trans.* vol. 32, p. 408; also, vol. 20, p. 56; and Mr. Earle's *Clinical Lecture* on this subject, as above. A very curious American case, where the cæsarean operation was successfully performed, and the parts generally resembled the cases above enumerated, is related by Dr. Hamilton, of Enfield, Connecticut, in *Boston Med. and Surg. Journal*, vol. 11, p. 93.

and Dr. Ashwell, to have no orifice into the uterus, nor was delivery accomplished until after an operation.* In this, and similar cases, it is supposed, that the orifice of the uterus being exceedingly minute, may be obliterated by slight local inflammation after conception.

In concluding this subject, it is proper to add, that there are many cases of constitutional sterility, which we cannot explain. Ashwell in his Treatise on Parturition, ascribes it to four principal causes; too early marriage—general ill health—too frequent sexual intercourse and dysmenorrhœa.† It is obvious, however, that these are far from being invariable, yet the frequency of barrenness among prostitutes, has led to some examinations, and afforded us several interesting facts. Some have referred it to a state of exhaustion of the uterine system, produced by excessive excitement, and in illustration, it is asserted that some of the most abandoned, on going to Botany Bay and marrying there, become the mothers of large families. An anatomical change would, however, seem to cause it in certain instances. Thus, Mr. Langstaff in several dissections, found the fimbriated extremities of the fallopian tubes on one or both sides, adherent to some of the neighbouring parts, and it is evident, that the constant state of inflammatory turgesence in the generative organs must lead to this.‡

From a review of the causes of impotence in both the sexes, it is evident that the absolute ones are few in number—that they are mostly palpable to the senses, and that the number formerly

* London Med. Gazette, vol. 20, p. 202, from the Guy's Hospital Reports for April, 1837. Ibid. vol. 20, p. 392, 585.

A case successfully operated on, in an unmarried female, by Professor Delpech, is given in the Medico-Chirurgical Review, vol. 17, p. 553.

† Review of his work in Amer. J. Med. Sciences, vol. 4, p. 149. Sterility is considered by the laws of various countries, a legal ground of separation. It is so among the Hindoos. By the laws of China, barrenness and talkativeness are two among the seven causes of divorce. The Koran also permits it. By the English and Scots law, sterility is a ground for divorce, *a mensa et thoro*. Edinburgh Encyclopedia, Art. *Barrenness*.

‡ Medico-Chirurgical Review, vol. 4, p. 405; Paris' Med. Jurisp., vol. 1, p. 215. See also Dr. Elliotson's Clinical Lectures, in Lancet, N.S., vol. 8, p. 55; Eberle's Med. Review, vol. 2, p. 394; Medico-Chirurgical Transactions, vol. 8, p. 505, vol. 13, p. 55.

It would appear from the observations of Parent Duchatelet (*De la Prostitution*, vol. 1, p. 230,) that prostitutes are far from being *absolutely* sterile. According to him, about twenty-two in the thousand bring forth children, but these seldom survive. Abortions also are common. Prostitutes are hence evidently much less prolific than virtuous females.

assigned to this class, has been greatly reduced by the improvements in surgery. The medical witness must of course regulate his testimony by these facts.

I have already stated the English law on this subject, and will here add a few of the decisions made under its general provisions.

In the case of *Briggs v. Morgan*, the suit was brought 16 months after marriage. The female had been a widow, and had lived eighteen years with a former husband. She was now fifty years old. Sir William Scott, (Lord Stowell) denied the application. It was brought too late. The female also, is beyond the ordinary time of child-bearing; and she further swore, that she had constant connexion with her first husband until near his death.*

In the case of *Greenstreet v. Cumyns*, the husband admitted the charge, and two physicians and two surgeons duly appointed, testified, that though the disease and imperfection of the parts were not such as to imply impotence, yet having heard his own history, they put faith in his account, and as he was in good health, they could hold out no hope of his weakness being remedied. The marriage was annulled on these grounds—the husband (Sir Wm. Scott observed) being in utter ignorance of his constitutional defects at the time of marriage.†

In *Norton v. Seton*, the husband instituted a suit for divorce after having been seven years married, on the ground of his own impotency and defect in his generative organs. It was with great justice denied by Sir John Nichol. “Here,” says he, “has been seven years’ cohabitation. *Cur tamdiu tacuit?*”‡

The doctrine that the impediment must have existed at the time of marriage and must be incurable, and that even if the last be proved, it must not have been a merely supervening defect, is decisively affirmed by Sir John Nichol in the case of *Brown v. Brown*.§

In *Pollard v. Wybourn*, it was proved by medical certificates, that the female, twelve years after marriage, was *virgo intacta* and *apta viro*. The husband had made several confessions of

* 3 Phillimore's Ecclesiastical Reports, p. 425. † 2 Phillimore, p. 10.

‡ 3 Phillimore, p. 147.

§ 1 Haggard's Ecclesiastical Reports, p. 523.

his incapacity, and refused, being in France, to answer to the complaint. The marriage was dissolved.*

I find that I was mistaken in stating, as I did, in the previous edition, that the English law was in force in this state. This point was solemnly adjudicated by Chancellor Sanford in 1825, in the case of *Burtis v. Burtis*. Here the wife filed a bill against her husband, and stated that he was impotent, and had been so from his birth. She, therefore, asked for a dissolution of the marriage. The defendant demurred, on the ground, that the complainant was not entitled to any relief, and that he ought not to be compelled to make any discovery. His counsel further urged, that impotence was a mere *canonical* cause of divorce, and that the English Chancery never claimed nor exercised any jurisdiction on that subject; while, in our own state, jurisdiction was given by statute. On the other hand, the counsel insisted that the jurisdiction of the ecclesiastical courts of England, in granting divorces and annulling marriages, had devolved upon, and appertained to, the Court of Chancery in this state.

The Chancellor, in his opinion, mentioned, that New York when a colony, was ruled for some years by governors, who either alone or with the council, assumed executive and judicial powers. During that period, one of the governors, Lovelace, granted four divorces, one in 1670, and three in 1672.† These

* 1 Haggard, p. 725. It would seem that the canon law in England required three years' cohabitation, before the party could be declared incapable. Such at least is asserted by Sir George Lee, (*Ecclesiastical Reports*, edited by Dr. Phillimore, vol. 2, p. 580,) in the case of *Welde v. Welde*. Here, the surgeon, as I have already stated, deposed to the removal of a natural phymosis, and he now believed the defendant capable. The wife was declared pure on the examination of midwives. Sir George Lee, however, refused to dissolve the marriage.

† For one of these I am indebted to the kindness of John V. N. Yates, Esq., late secretary of state; and as it has never been published, I prefer giving the proceedings at full length, as copied from the records.

“Nicholas W——, of Oysterbay, on behalf of Rebekah his daughter, wife of Eleazer L——, of Huntington, made complaint unto me of the uncomfortable condition wherein his said daughter hath, for divers years past, lived with her said husband; and there having been formerly several complaints made, both on the part of the relations of the husband, as well as those of the wife, suggesting some notorious fault or impediment on the one side or the other, which hitherto hath not been fully or clearly made appear, so that mutual discords and differences do still continue. To the end a fair composure of the same may be affected, or some other lawful course taken therein, I have, by and with the advice and consent of my council, thought fit to ordain and appoint, and by these presents do ordain and appoint, that Eleazer L—— and Rebekah his wife do appear now in this city, upon Wednesday the fourth of May next, before a special court appointed to examine into and determine the matter in difference between them; and all persons concerned, or that can give in evidence on either part, are hereby required to make their appearance before the said court, for the better clearing of the truth, so that the con-

were the only cases that occurred, during and through the long period of more than one hundred years, down to the revolution. Subsequent to that period, no provision on this subject had been made by the legislature.

troversy may be decided according to law and good conscience. Given under my hand at Fort James in New York, this 1st day of April, 1670.

“FRANCIS LOVELACE, Governor.”

Volume marked “Court of Assize, 1665 to 1672”—vol. 2, p. 139.

A Commission, &c.

“Whereas complaint hath been made unto me by Nicholas W——, on the behalf of Rebekah his daughter, against Eleazer L——, her husband, and also by the said Rebekah against him the said Eleazer, that having been joined in matrimony for the space of seven years and a half or thereabouts, he the said husband hath not performed conjugal rights unto his wife, but on the contrary hath caused her to lead a very uncomfortable life with him; and the said father and daughter upon supposition of impotency and insufficiency in the said Eleazer L——, having sued for a divorce, the hearing and examination into which matter I do not judge meet should come on before a public court, I have therefore thought fit to nominate and appoint, and by these presents do hereby nominate and appoint Thomas Lovelace, Esq., Mr. Samuel Maverick, Mr. Matthias Nicolls, Capt. John Manning, and Mr. Humphrey Davenport, to be commissioners, to meet at some convenient place this afternoon, then and there to hear and examine into this matter in difference between the said Eleazer L—— and Rebekah his wife. To which end, you are to call both parties before you, or whosoever also can give evidence or testimony in the matter; to whom you may administer an oath, for the better clearing of the truth; which oath you are hereby empowered to give; as also to employ any other person or persons skilful in such matters, to make inquiry into the defect and impediments alleged; whereupon you are to give judgment, and render an account, that I may make some final determination thereupon. Given under my hand and seal, this sixth day of May, in the 22d year of his majesty’s reign, A. D. 1670.—Ibid. p. 175.

A Divorce granted to Rebekah W——, from Eleazer L——.

“Whereas Nicholas W—— of Oysterbay, on the behalf of his daughter Rebekah, the wife of Eleazer L——, and the said Rebekah for herself, did make their complaint unto me against the said Eleazer L——, her husband; that she having been his reputed wife for the space of seven years and a half, she hath not in all that time received any due benevolence from her said husband, according to the true intention of matrimony, the great end of which is not only to extinguish those fleshly desires and appetites incident to human nature, but likewise for the well ordering and confirmation of the right of meum and tuum, to be devolved upon the posterity lawfully begotten betwixt man and wife, according to the laws of the land and practice of all Christian nations, in that case provided; and did therefore sue for a divorce. Whereupon, having appointed commissioners to call both parties before them, and strictly to examine into the affair, and to make report of their judgment thereupon; the which, after serious inquiry made by them, with the advice of chirurgeons well skilled, and sober matrons, who privily examined both the man and the woman, they made report of their judgment and opinion, that the defect was in the husband, and not in the wife, and there was a sufficient ground for a divorce. All which being afterwards represented to my council, and they having declared themselves in the same opinion. For the reasons afore specified, the pretended marriage between the said Eleazer L—— and Rebekah W—— is hereby adjudged and declared to be void, null and invalid, together with all the consequences thereof; and the said Rebekah W—— is hereby acquitted, made free, and divorced from all pretences of marriage, or matrimonial ties and obligations between her and the said Eleazer; and the said Rebekah hath likewise free liberty to dispose of herself in lawful marriage with any other person, as if the ties and obligations between her and the said Eleazer had never been. Given under my hand, and sealed with the seal of the province, this 22d day of October, in the 22d year of his majesty’s reign, A. D. 1670.”—Ib. p. 260.

“The law of England concerning divorces, is, chiefly, the ecclesiastical law and not the common law of that country, and it has never been adopted in this state. Our statutes concerning divorces are original regulations, and they do not adopt or introduce the English law of divorces. We have no judicature authorised to adjudge by a substantive and effectual sentence, that a marriage is illegal, and to separate the parties. This court cannot, therefore, dissolve a marriage or decree a divorce for the cause of corporeal impotence.”*

In our Revised Statutes, however, passed in 1828, the omission, if it may be so styled, was rectified. The chancellor has now the power of declaring the marriage contract void, for (among other causes) physical incompetency in either of the parties, existing at the time of marriage. It is further enacted, that a suit to annul a marriage on this ground, shall only be maintained by the injured party against the party whose incapacity is alleged; and shall in all cases, be brought within two years from the solemnization of the marriage.†

The present chancellor of this state (Walworth) has also decided that a sentence of nullity on the ground of impotence, cannot be pronounced upon a bill of confession; but that the defendant must be examined on oath before the master, and who must also take proof of the facts and circumstances stated in the complainant's bill. In the present case, which was that of a female, charged by her husband with impotence, he declared that the court would not decree the marriage void, until a surgical examination had been had in order to ascertain whether the alleged incapacity is incurable. The master was directed to select surgeons and matrons for this purpose, and in the choice to have due regard to the feelings and wishes of the defendant.‡

In Pennsylvania, by an act passed March 13, 1815, it is enacted, “that if either party, at the time of the contract, was and still is naturally impotent, or incapable of procreation, it shall and may be lawful for the innocent and injured person to obtain a divorce.”§

Impotence is made a cause of divorce, by the laws of New

* Hopkins' Chancery Reports, vol. 1, p. 557.

† Revised Statutes, vol. 2, pp. 142, 143.

‡ 5 Paige's Chancery Reports, 554. *Devanbagh v. Devanbagh*.

§ Griffith's Ryan, p. 111.

Hampshire, Illinois, Indiana, Tennessee, and Missouri.* And the following case shows that the law is similar in Ohio.

In the case of *Keith v. Keith*, the wife plaintiff, and about 28 years of age, had been married about a year and a half to the defendant, who was about 35 years old, of common size, but without beard, and with a fine feminine voice. They lived together about a year, when she left him, and went to her mother's, with whom she has since resided. Three respectable witnesses deposed that they had examined the defendant a few days previous to the sitting of the court, and that he was destitute of virile organs. "He had no testicle, only a little loose skin, as large as that containing the testicle of a squirrel. He had no penis. Between the place of one and the navel, there was a teat, about three-fourths of an inch long, with a black spot in the centre, out of which he discharged urine."

By the Court. Take a decree for a divorce. Let each keep the property they have, and order the defendant to pay the costs, or be subject to execution for them.†

I do not find it mentioned in the laws of New Jersey, Georgia, and Michigan.

* Digest of Laws of N. Hampshire, 1830, p. 157. Revised Laws of Illinois, 1833, p. 233. Revised Laws of Indiana, 1831, p. 213. Digest of Laws of Tennessee, 1831, p. 74. Laws of Missouri, 1825, p. 329.

† Wright's Ohio Supreme Court Reports, p. 518.

CHAPTER IV.

DOUBTFUL SEX.

Denial of the existence of hermaphrodites, in the ancient sense of the term. Notice of the various mal-conformations that have been observed. 1. Individuals exhibiting a mixture of the sexual organs, but neither of them entire. 2. Males with unusual formations of the urinary and generative organs. 3. Females with unusual formations of the generative organs. Ancient laws concerning hermaphrodites—English common law concerning them. Notice of Geoffroy St. Hilaire's late researches on hermaphroditism.

THE ancients have several fables founded on the idea of the union of the qualities of the male and female in the same individual. One of the personages who was supposed to be thus endowed, was named Hermaphroditus; and from him the term *hermaphrodite* has come into general use, as applicable to this class of beings. Although formerly credited, yet it is now agreed that no such individual of the human species has ever existed; but it is equally well established, that many cases of extraordinary mal-conformations have occurred. I conceive that the most useful notice of this subject, will be, to relate the more remarkable cases according to the arrangement usually adopted by writers of the present day.

Considering, therefore, the subject of proper hermaphrodites, or those endowed with the sexual organs of both sexes entire, and capable of performing the generative functions, as fabulous, we shall examine those to whom the above term is at present commonly applied, under three classes.

1. *Individuals exhibiting a mixture of the sexual organs, but neither of them entire.* Examples of this class are rare; and even these, when closely examined, show the predominance of one or other sex. Dr. Baillie mentions a case which was communicated to him by Dr. Storer of Nottingham. "The person,"

he observes, "bears a woman's name, and wears the dress of a woman. She has a remarkable masculine look, with plain features, but no beard. She has never menstruated; on this account, she was desired by the lady with whom she lived as a servant, to become an out patient in the Nottingham hospital. At this time she was twenty-four years of age, and had not been sensible of any bad health, but only came to the hospital in order to comply with the wishes of her mistress. Various medicines were tried without effect; which led to the suspicion of the hymen being imperforated, and the menstrual blood having accumulated behind it. She was, therefore, examined by Mr. Wright, one of the surgeons to the hospital, and by Dr. Storer. The vagina was found to terminate in a cul-de-sac, two inches from the external surface of the labia. The head of the clitoris, and the external orifice of the meatus urinæ, appeared as in the natural structure of a female; but there were no nymphæ. The labia were more pendulous than usual, and contained each of them a body resembling a testicle of moderate size, with its cord. The mammæ resembled those of a woman. The person had no desire or partiality whatever for either sex."*

The Memoirs of the Academy of Dijon contain the following case, communicated by M. Maret. Hubert J. Pierre died at the hospital in October, 1767, aged seventeen years. Particular circumstances had led to a suspicion of his sex, and these induced an examination after death. His general appearance was more delicate than that of the male; and there was no down on his chin or upper lip. The breasts were of the middle size, and had each a large areola. The bust resembled a female; but the lower part of the body had not that enlargement about the hips, which is usually observed at his age. On examining the sexual organs, a body four inches in length, and of proportionate thickness, resembling the penis, was found at the symphysis pubis. It was furnished with a prepuce to cover the glans; and at its extremity, where the urethra usually opens, was an indentation. On raising this penis, it was observed to cover a large fissure, the sides of which resembled the labia of a female. At the left side of this opening, there was a small round body like a testicle, but none on the

* Morbid Anatomy, third edition, p. 410.

right; however, if the abdomen was pressed, a similar body descended through the ring. When the labia were pushed aside, spongy bodies resembling the nymphæ were seen; and between these, and at their upper part, the urethra opened as in the female, while below these was a very narrow aperture, covered with a semilunar membrane. A small excrescence, placed laterally, and having the appearance of a caruncula myrtiformis, completed the similarity of this fissure to the orifice of the vagina. On further examination, the penis was found to be imperforate; the testicle of the left side had its spermatic vessels and vas deferens, which led to the vesiculæ seminales. By making an incision into the semilunar membrane, a canal one inch in length, and half an inch in diameter, was seen, situated between the rectum and bladder. Its identity with a vagina was however destroyed, by finding at its lower part the verumontanum and the seminal orifices; from which, by pressure, a fluid, resembling semen in all its properties, flowed. The most astonishing discovery was, however, yet to be made. The supposed vagina, together with the bladder and testicles, was removed. An incision was made down to the body noticed on the right side. It was contained in a sac, filled with a limpid and red coloured liquor. From its upper part on the right side, a fallopian tube passed off, which was prepared to embrace an ovarium placed near it. It seemed thus proved that the body in question was a uterus, though a very small and imperfect one; and on blowing into it, air passed through to the tube.*

Giraud dissected a subject at the Hotel Dieu, who, during life, had been received in society as a woman, and was connected by a voluntary association with a man, who had for a long time performed the duties of a husband towards her. The bust had a masculine appearance; the chin was covered with firm hairs, very analogous to a beard; the neck was thick, the chest broad, the bosom slightly swollen, and the nipples exactly like those of a man. The lower half of the body presented a contrast to these characters. The soft and delicate contour of the lower limbs, the rounded hips, the broad pelvis, and the greater separation of the thighs, approximated decidedly to the female form. An imperforate penis, two testicles, and an appearance of vulva, were

* Mahon, vol. 1, p. 100.

the external generative organs. The testes were well formed; the vesiculæ seminales imperfect; and the urethra opened at the cul-de-sac which represented the vagina.*

The following is a very recent case, exhibited in July, 1834, at Liverpool. The individual is a native of Saxony, with the voice and features of a man, a light beard on the upper lip, and the breasts not developed. He is thirty-four years old, and was considered at birth as a female, and dressed as such until about a year since, when Blumenbach and Tiedemann told him that he was a man. He then assumed the male attire. The scrotum is divided along the median line, resembling the female labia; and each of these contains a testis. On separating them, the glans penis, resembling a clitoris, is seen; it is covered with a prepuce, and has a fissure, but is imperforate. About an inch below, and nearly half an inch to each side of the raphe, are two very small orifices, through which, at periods of excitement, the semen flows. Still lower is a canal three inches long, impervious except at a narrow orifice through which the urine flows. He had strong sexual desires.†

The case of the child examined by Professor Ackermann of Jena, probably belongs to this division. It was born at Mentz on the 14th of June, 1803, and died on the 25th of the month following. Dr. Ackermann viewed the body during life, and also dissected it after death. The penis was little more than an inch long; the glans was distinct about one-third of its whole length, but imperforated; there was, however, a depression where the urethra should have opened. On raising this cliteroid penis, as he calls it, an opening was observed, which was the orifice of a canal one inch in length. The uterus and urethra opened into the posterior part of this canal; and the testicles, with their tuniæ vaginales, were found in the labia. As to the internal organs, the urinary bladder occupied its usual place; one of the testicles had descended into the scrotum, and the other had advanced no farther than the groin; both were perfect, and had their usual appendages complete. In the place usually occupied

* Rees's Cyclopaedia, Art. Generation. The case is quoted from the *Journal de Médecine*, par Sedillot.

† American Journal of Medical Sciences, vol. 15, p. 191, from the *Liverpool Medical Journal*. A more accurate account, by Dr. Handyside, with a plate, will be found in the *Edinburgh Medical and Surgical Journal*, vol. 43, p. 313. This individual has constant connexion with the male sex.

by the female uterus, there was found an organ closely resembling it. Its figure was pyriform, and it opened by a round orifice in the *vagina urethralis*, as he styles the canal, a little before the orifice of the urethra. The vasa deferentia penetrated the substance of the uterus at the points where the fallopian tubes are usually placed, but without opening here, passed on, and at length terminated by very small orifices in the *vagina urethralis*.*

Other cases are mentioned by various authors, but the similarity between them is so great as to render a farther detail unnecessary. The examples now given, show the greatest deviations from the perfect structure that have been observed; and it will lead to clearer views concerning them, if we adopt the opinions of the reviewer of Ackermann, in the journal already quoted. "In the two sexes, there are organs which correspond to each other, and which may be called analogous organs—the penis to the clitoris, the scrotum to the labia, the testes to the ovaria, and the prostate to the uterus; and it farther appears, that of these analogous organs, no two were ever found together in the same individual. *No monster has been described, having both a penis and clitoris; nor with a testis and ovarium of the same side—we may venture to say, with testes and ovaria; nor one having a prostate and uterus.*" This distinction will invalidate the account given by Maret, so far as it relates to the presence of an ovarium and a fallopian tube; but I suggest whether it is not probable that the organ in question was a testicle, and its appendages malformed. The idea of our author is also no doubt correct, that in repeated instances the part deemed to be a uterus is a *malformed prostate*. "The proof rises almost to certainty, when we recollect that the prostate is the only male organ not accounted for in the hermaphrodite."† If these views be adopted, it will follow as a result, that beings of this class are to be considered as males; and it need hardly be added that they are impotent.‡

There are, however, two cases on record, which we cannot

* Edinburgh Medical and Surgical Journal, vol. 3, p. 202. Review of "*Infantis Androgyni Historia et Ichnographia*," &c. Auctore I. F. Ackermann.

† Edinburgh Medical and Surgical Journal, vol. 3, p. 208.

‡ To this division, among recent cases, probably belongs that at Guy's Hospital, of a person aged twenty, in January 1828. *Lancet*, N. S. vol. 1, p. 593; and *American Journal of Medical Sciences*, vol. 2, p. 412. A case much resembling that of H. J. Pierre, is said to have recently occurred in Sicily, in an individual dead at the age of eighty, and who had been married as a female. *London Med. Gaz.* vol. 10, p. 64.

explain in conformity to the above opinions. Even if the first be deemed, and it doubtless is, imperfect; yet the last is vouched for by one of the most eminent anatomists of the present day.

The late Dr. Handy of New York, in a letter to Dr. Edward Miller, dated at Lisbon in 1807, states that he saw at that place, a Portuguese, twenty-eight years old, of a tall and slender but masculine figure. "The penis and testicles with their common covering, the scrotum, are in the usual situation, of the form and appearance and very nearly of the size of those of an adult. The preputium covers the glans completely, and admits of being partially retracted. On the introduction of a probe, the male urethra appeared to be pervious about a third of its length, beyond which the resistance to its passage was insuperable by any ordinary justifiable force. There is a tendency to the growth of a beard, which is kept short by clipping with scissors. The female parts do not differ from those of the more perfect sex, except in the size of the labia, which are not so prominent, and also that the whole of the external organs appear to be situated nearer the rectum, and are not surrounded with the usual quantity of hair. The thighs do not possess the tapering fullness common to the exquisitely formed female; the ossa ilia are less expanded, and the breasts are very small. In voice and manners the female predominates. She menstruates regularly, was twice pregnant, and miscarried in the third and fifth months of gestation. During copulation, the penis becomes erect. There has never existed an inclination for commerce with the female, under any circumstances of excitement of the venereal passion. She at present labours under the venereal disease, and has warts on the labia."*

Orfila and Marc both notice this case, and urge that a perfect anatomical examination of the supposed testicles was wanting. They incline to the idea that the partially perforated penis was of a cliteroid nature. They agree however in deeming the subject a female.

In the following case however, the dissection was ample. It was related to the Academy of Sciences of Berlin in 1825, by Rudolphi. The body was that of a child, who had died, as it was said, seven days after birth; but from the developement

* New York Medical Repository, vol. 12, p. 86.

present, it was probably several weeks old. "The penis was divided inferiorly; the right side of the scrotum contained a testicle, the left side was small and empty. There was a uterus which communicated at its superior and left portion with a fallopian tube, behind which was an ovary destitute of its ligament. On the right side, there was neither fallopian tube, nor ovary, nor ligament, but a true testicle from the epididymis of which there arose a vas deferens. Below the uterus, there was a hard, flattened, ovoid body, which when divided, exhibited a cavity with thick parietes. The uterus terminated above in the parietes of this body, and at the right, the vas deferens, without however penetrating into its cavity. Finally, at its inferior part, there was a true vagina, which terminated in a cul-de-sac. The urethra opened into the bladder, which was natural. The anus, rectum and the other organs were naturally formed. Professor Rudolphi considered the ovoid body, situated beneath the uterus, as the prostate and vesiculæ seminales in a rudimental state."*

2. *Male individuals with unusual formations of the urinary and generative organs, (androgyni.)* "The ambiguity in these cases depends commonly on the testes being contained in separate parallel folds of the skin; the penis being imperforate, and the urethra opening in the perinæum, on the surface of a blind aperture, having a red and tender appearance, and easily mistaken

* American Journal of Medical Sciences, vol. 9, p. 499.

The case of Maria Derrier, (Carl Durrge) which in the last edition, I referred with some hesitation to the second class, must now be arranged under this.

Durrge died at Bonn in March 1835, of apoplexy, aged 55 years. He was examined by Professor Mayer, and from his account, I take the following facts:

Osiander, Kopp, Sömmering, Cooper, Lawrence, Green, and the Medical Faculty of Paris, pronounced him during life, a malformed male. Hufeland, Gall and Brookes, a female, while some considered him to belong to neither sex. In his 20th year, he had discharges of blood from the genital organs three times, but none since. His beard grew sparingly and the breasts were large.

The penis (imperforate) was about two inches long, and retracted beneath the skin of the mons veneris, and immediately at its lower surface, was a small opening of the size of a large quill. A septum divided this from a large canal, which represents the vagina. The urethra is thus at the root of the penis, and immediately surrounded by the prostate gland. Immediately back of the vagina, is the uterus. The fallopian tubes open regularly into the fundus uteri and upon the left side behind and without the corresponding ostium abdominale of the fallopian tube, is a small, flat, round body, resembling an ovarium. On the right side, close to the abdominal end of the fallopian tube, there is a small flat body, to which a string of vessels and muscular fibre is attached.

Dr. Mayer thus supposes this case to present characteristics of both sexes—the withered testicle—the penis and the prostate gland; and on the other hand, the uterus, vagina, fallopian tubes and ovarium-like body. London Med. Gazette, vol. 18, p. 217.

for the vagina. In such an individual, the penis being imperforate, and probably smaller than usual, is considered as a large clitoris; the folds of the skin holding the testes, very much resemble the female labia, and the red slit behind which the urethra ends, is tolerably analogous to the vagina."* A marine, answering perfectly to this description, was sent to the hospital at Toulon in 1799, as a hermaphrodite. He was about twenty years of age, with little beard, and breasts resembling those of a girl at sixteen. A discharge from the service was procured for him.† Individuals of this class, appear to have the testes and vesiculæ seminales perfect, but they must evidently be impotent from the imperforation of the penis, and the opening of the ejaculatory ducts near the perinæum. Here the semen is of course expelled.

Deviations less marked, have also been observed, and among others, a confinement of the penis to the scrotum, by a particular formation of the integuments, has occasioned persons to be reputed hermaphrodites. In these, the urine passes in the direction downwards, and the confinement of the organ will not allow of its performing the sexual functions. Mr. Brand relates, that being consulted in 1779, on occasion of some complaint in the groin about a child, seven years of age, he found a vicious structure of the sexual organs, consisting in the presence of such an unnatural integument. This child had been baptized and brought up a girl, but it was evident to him erroneously, as the male organs were present. By a slight incision, he liberated the restricted parts, and proved to the parents, that they had mistaken a boy for a girl.‡

* Rees' Cyclopaedia, art. *Generation*.

† Foderé, vol. 1, p. 357. An instructive case, accompanied with a plate, is related by J. S. Soden, surgeon at Coventry. The individual resided at that place, and wore the attire of a female. The beard was strong, the breasts flat, and the hips straight. The genital organs generally resembled the above description. The scrotum contained the testicles, but it was divided, and resembled the labia. The urine was evacuated at the perinæum. (Edinburgh Med. and Surg. Journal, vol. 4, p. 32.) There certainly can be no doubt of this person being a male.

The Saxon case, that I have described on a previous page, might with propriety be arranged under this division, were it not for some circumstances, mentioned in Dr. Handyside's Narrative.

‡ Brand, quoted in Brewster's Edinburgh Encyclopedia, art. *Hermaphrodites*.

"Myself passing by Vitny le François, a town in Champagne, saw a man, the Bishop of Soissons had in confirmation, called *German*, whom all the inhabitants of the place had known to be a girl till two and twenty years of age, called *Mary*. He was at the time of my being there very full of beard, old and not married, who told us, that by straining himself in a leap, his male instruments came out."—*Montaigne's Essays*. Ambrose Paré also mentions this case.

Lastly, males are supposed to be hermaphrodites, when the urinary bladder is deficient, together with the lower and anterior portion of the abdominal muscles, and integuments, while a red and sensitive mass of an irregular and fungous like substance, with the ureters opening on it, is placed at the lower part of the abdomen. I have already referred to the elaborate essay of Dr. Duncan, jun. on this subject. He has collected a great number of cases, and from his deductions, it appears that important alterations in the generative organs are generally observed, in consequence of this deformity. The urethra is deficient, and the penis consequently imperforate. It is also very short—never exceeding two inches, even in the adult. The vesiculæ seminales open near the fungous mass above mentioned, or in the urethra, or in a small tubercle at the root of the penis. The testicles are generally natural, either contained in the scrotum, or they have not descended. The sexual appetite in some of these individuals has been weak; in others strong; in others altogether wanting.*

They are not capable of procreating the species, in consequence of the shortness and imperforation of the penis, and the seminal ducts opening externally.†

* Edinburgh Medical and Surgical Journal, vol. 1, p. 54 to 58. The following is an exception of the general rule, unless we suppose the mal-conformation to have been slight, and the prevalent opinion to have been drawn from the appearance. "In the year preceding (1459) there was a bairn which had the kinds of male and female, called in our language a *scarcht*, in whom man's nature did prevail: But because his disposition and portraiture of body represented a woman, in a man's house of Linlithgow, he associated in bedding with the goodman's daughter of the house, and made her to conceive a child; which being divulgate through the country, and the matrons understanding this damsel deceived on in this manner, and being offended that the monstrous beast should set himself forth as a woman, being a very man, they got him accused and convicted in judgment for to be burnt quick, for this shameful behaviour." (Piscottie's History of Scotland. Edinburgh, 1778, p. 104.)

† Under this head, I apprehend, must be arranged the case of Sarah Tibbert, aged six, admitted into St. George's Hospital, London, 1825. (Lancet, vol. 8, p. 95.)

That of a negro child, aged six, described by Dr. Heustis of Alabama, in whom the penis is perforated, but the urethra opens externally at its root. The rudiments of testicles are felt in the sacculi on each side of the scrotum. (American Journal of Medical Sciences, vol. 7, p. 557.)

One By Dr. Hervey, of an individual who died at the Hospital of Bourg in France, aged seventeen. (American Journal of Medical Sciences, vol. 3, p. 185, from the Journal Général.)

Mary Cannon, who died at Guy's Hospital in 1829, aged fifty-five or sixty. This hybrid formerly wore man's dress, had worked as a labourer, and had been engaged in pugilistic combats. For the last seven or eight years, she appeared as a female. (Lancet, N. S. vol. 5, p. 181; and London Medical Gazette.)

Marie Marguerite, whose history was given by Dr. Worbe to the Faculty of Medicine in Paris in 1815. (Dictionnaire des Sciences Médicales, Art. *Hermaphrodite*.)

The case by Gendrin, where the person was considered a female until the age of

3. *Females with unusual formations of the generative organs, (androgynæ.)* An enlargement of the clitoris is probably the most common cause that has led to mistakes concerning this sex. It seldom occurs in Europe, but is quite frequent in warm climates, insomuch that excision of it is said to be sometimes practised.

Sir Everard Home relates an instance in a Mandingo negress, aged twenty-four years. Her breasts were very flat; her voice was rough, and her countenance masculine. The clitoris was two inches long, and in thickness resembling a common-sized thumb; when viewed at some distance, the end appeared round, and of a red colour; but on a closer inspection, was found to be more pointed than that of a penis—not flat below, and having neither prepuce nor perforation. When handled, it became half erected, and was then three inches long, and much larger than before; and on voiding her urine, she was obliged to lift it up,

nineteen, (in 1831,) when, on examination, the registry of baptism was ordered to be altered, and the surname changed to that of a male. (*Medico-Chirurgical Review*, vol. 21, p. 172, from the *Revue Médicale*.)

And probably the two cases described by Dupuytren to the Royal Academy of Medicine at Paris in 1830. (*North American Medical and Surgical Journal*, v. 12, p. 224.)

A German recently exhibited to the Royal Academy of Medicine, by M. Bally. The scrotum had a deep furrow, on each side of which was contained a testicle. There was an imperforate penis, an inch and a half long and below it a passage leading to the bladder and through which the urine flows. The urethra had become thus enormously distended in consequence of repeated acts of copulation, to which he had submitted in consequence of supposing himself a female. His appearance is of that sex and he states that the enlargement was gradually made. When informed that he was a male, he assumed the proper dress, but found himself impotent. *Amer. Journal Med. Sciences*, vol. 20, p. 479, from *Gazette Des Hopitaux*.

Nor can I, in concluding these references, avoid giving an abridged detail of the following case from Dr. Davis. A person in London was baptized as a female—dressed as such, and during the years of childhood and adolescence, believed herself belonging to that sex. Her passions became so far developed as to cause her to make advances to a gentleman; who being disappointed, committed a furious breach of the peace. The police took both into custody, and this finally led to an examination, at which Dr. Davis, Prof. Pattison and several others, were present. A substance resembling the clitoris, but a little larger, was seen, having about half an inch of its gland, uncovered by its prepuce. Below the root of this cliteroid body, on raising it a little, a small orifice was observed communicating with the bladder. Precisely at the usual locality of the opening into the vagina, there was a round aperture of scarcely half an inch in diameter. This aperture was surrounded by a carneo-membranous structure of no great thickness, but of considerable firmness and tenacity. Dr. D. experienced so much resistance on attempting to pass the finger, that he did not dare to continue it; but on introducing a bougie, a cul-de-sac was found at about an inch beyond. On each side of this opening were two full developed pendulous bodies, evidently testes, which communicated by spermatic cords, of the usual bulk and feel, with the abdominal cavity. The breasts were not developed, and the voice was rough. Dr. Davis very justly considers the sex of this person as masculine. (*Obstetric Medicine*, p. 63.)

as it completely covered the orifice of the urethra. The other parts of the female organs were found to be in a natural state.* It is proper to observe in this place, that in new-born children the clitoris is proportionably very large.

In 1814, a female named Mary Madeline Lefort, excited great attention in Paris, and subsequently in London, as a reputed hermaphrodite. She was examined by a committee of the *Faculté de Médecine* of that city, (consisting of Chaussier, Petit-Radel and Beclard;) and from their report and the remarks of other observers, the following particulars are drawn. The breasts were sufficiently developed, and there were perfect areolæ on the nipples. The upper lip and chin were covered with a beard. The clitoris resembling much a small penis, an inch and a half long and invested with a moveable prepuce, emerged from under the symphysis pubis, and shooting out from between the superior part of the labia, terminated by an imperforated glans. At the root of the clitoris is an opening, through which the urine and *menses* flowed. On separating the labia, a thick membrane was seen to extend from one to the other, and from the lower angle formed by their union, upwards as far as the prominent clitoris already described. Dr. Granville supposed that this membranous partition covers the orifice of the vagina, and that an incision made into it would at once expose that cavity in its natural state. Mr. Brookes, the anatomist, proposed to effect an enlargement of the opening of the vagina, but the subject of the malformation refused, calculating no doubt that such an operation might have injured the interests of her gainful vocation. An incomplete urethra was in this case produced under the clitoris, and it was this circumstance which constituted its resemblance to a penis. But the

* See Home on Hermaphrodites. (Philos. Trans. vol. 89, p. 157.) Many other cases are said to be collected in the work of Dr. Parsons on Hermaphrodites. (See a case by him of a French girl, in Philosophical Transactions, vol. 47, p. 142.)

I have stated in the text, that this malconformation seldom occurs in temperate climates; but I may add, that a sufficiency of cases are related. "An entire quarto thickly printed page of references to cases of monstrous clitorides, is given in the *Ephem. Germ.*" (Davis' Obstetric Medicine, p. 60.) This author refers to a case of extirpation by Mr. Richard Simmons, of London, in which the length was nine inches, and the circumference of the largest part of the stem five inches. Its general appearance was very smooth and fleshy, and its upper surface covered with cuticle. (Ibidem, p. 61.) My colleague, Professor Delamater, has mentioned to me a case within his own observation, where the husband became extremely dissatisfied, and indeed thought of applying for a divorce, on account of the impediments he met with from what proved to be an enlarged clitoris. Its removal obviated his objections.

presence of organs essential to the female, such as the uterus and vagina, leave no doubt of her sex.*

A prolapsus of the uterus is another circumstance which has occasioned females to be deemed hermaphrodites. Margaret Malaure came to Paris in 1693, dressed as a man. She considered herself as possessing the organs of both sexes, and stated that she was able to employ both. Her person was exhibited; and several physicians and surgeons agreed with the common opinion so much, as to give certificates that she was an hermaphrodite. Saviard, an eminent surgeon, was, however, incredulous. He examined her in the presence of his brother practitioners, and found that she had a prolapsus uteri, which he reduced.†

Sir Everard Home mentions a similar case of a French woman, whom he himself examined. She was shown as a curiosity; and in the course of a few weeks, made £400. The prolapsus was evident on inspection. She, however, pretended to have the power of a male.‡

It will readily be observed from the above illustrations, that all the cases of supposed hermaphrodites are referable to the classes now described. They are either males, with some unusual organization or position of the urinary or generative organs; or females with an enlarged clitoris, or prolapsed uterus; or individuals in whom the generative organs have not produced their usual effect in influencing the developement of the body.§ Thus it is evident, that instead of combining the powers of both sexes, they are for the most part incapable of exerting any sexual function.||

* London Medical Repository, vol. 4, p. 414. Orfila's Leçons, vol. 1, p. 153. Davis's Obstetric Medicine, p. 62. Elliotson's Blumenbach, p. 420, 422. Cyclopaedia of Practical Medicine, Art. *Sex*, (*doubtful*), by Dr. Beatty. Medico-Chirurgical Review, vol. 31, p. 120.

Parent-Duchatelet, speaks of a large clitoris occurring in a prostitute in Paris. It was three inches long and of the thickness of the ring finger, with a well-formed glans and covered with a prepuce—"c'était, a s'y méprendre, la verge d'un enfant de douze a quatorze ans, peu avant sa puberté." De La Prostitution, vol. 1, p. 220. This female had never menstruated and the uterus was probably wanting.

† Mahon, vol. 1, p. 96.

‡ Home ut antea. A case similar to the above is related in Valentini Pandectæ, vol. 1, p. 38.

§ In a recent discussion at the Academy of Medicine at Paris, Adelon, a very high authority, maintained that all the cases were referable to one or other of the above classes; and that there never was "a coexistence of the parts belonging to, or characteristic of either sex, in one being." (Med. Chir. Review, vol. 24, p. 237.)

|| Velpeau, in his Midwifery, (American edition, p. 81,) has suggested that in

Yet the prejudices of ancient nations seem to have marked these unfortunate individuals as objects of persecution, and to have subjected them to the operation of the most absurd and cruel laws. Diodorus mentions that they had been burned by the Athenians and Romans. At an early period of Roman history, a law was enacted, that every child of this description should be shut up in a chest, and thrown into the sea; and Livy gives an instance, where, on some difficulty with respect to the sex of a newly born infant, it was directed to be thrown into the sea—*tanquam fœdum et turpe prodigium*.* The Jewish Talmud, we are told, contains many ordinances founded on the apparent predominance of sex.

The canon and civil law have also many enactments concerning them. Among other questions vigorously debated, was that whether they should be allowed to marry; and it appears that they were even not prevented; but if the two sexes were equal, a choice of the object was left. Some learned opinions on this subject may be found in Valentini.†

Hermaphrodites could not, however, be promoted to holy orders, on account of their deformity or monstrosity; nor could they be appointed judges, “because they are ranked with infamous persons, to whom the gates of dignity should not be opened.”

An old French law allowed them great latitude. It enacted that hermaphrodites should choose one sex, and keep to it.‡

These absurd notions and practices have now disappeared; but the subject is, notwithstanding, important on many accounts, as these unusual deviations often render the sex of an individual doubtful, and impose even on professional persons. The decision may be important in deciding the employment in life of an individual, the descent of property, and the judicial decisions concerning impotence or sterility. Thus, Mr. Ferrein, a modern physician, informs us, that he was consulted by the relatives of a young nobleman labouring under a dubious conformation, who, if

some of the supposed cases of hermaphroditism, congenital hernia of the ovaries may be mistaken for testicles. He refers to this the case of Prof. Mayer of Bonn, and also one examined by Marjolin. In the former, (a child six months old,) there were a uterus, vagina and fallopian tubes; while on the sides, there were folds of the skin like a split scrotum, with oval bodies in each. The clitoris was separated at its glans by a fissure. (Lancet, vol. 9, p. 169, from Graefe's Journal.)

* Livy, 27, 37. Eutropius, 4, 36.

† Novellæ Cas. 10, de matrimonio hermaphroditi.

‡ Male, p. 278.

a male, as was commonly believed by them, would inherit a considerable estate, but to which he could have no right if he belonged to the other sex. The whole external mien resembled that of girls of twelve years of age; the breasts were quite flat, and the voice masculine. An external sexual organ of small size was present, but without a urethra. In the scrotum was a deep fissure, through which the urine was discharged. He was induced to declare her a female, and thus she would consequently lose the expected inheritance. This decision is, however, incorrect, at least if we adopt the views already laid down.

The following circumstances are worthy of notice, in forming our opinions on contested cases. The beard, the hair on various parts of the body—the desires excited by the presence of women—the testes and their cords, and the comparatively greater breadth of the shoulders than of the pelvis and hips, show us that the individual is a man. The smoothness and softness of the body in general—the absence of the beard, and of hair on the body—the menstrual discharge—the want of testes, and the superior breadth of the hips, prove the individual to be a woman.

On proceeding to the sexual organs, a male with a fissure in the perinæum, and an imperforate penis, may be ascertained by the size of the penis; by the different organization of the prepuce from that which covers the clitoris; by the absence of nymphæ and hymen, and probably by the presence of testes. The different relation of the fissure in the perinæum to the penis, from that of the meatus urinarius to the clitoris in the female, will assist the decision; as also the want of power to pass an instrument towards the situation of the uterus.

On the other hand, a female is indicated by the size of the clitoris, and its different shape; by the connexion of its prepuce with the nymphæ, and the presence of the latter parts; by the separate opening of the vagina and meatus urinarius, and by the presence of the hymen, and the absence of the testicles.

All these circumstances now enumerated, tend to assist us in viewing the adult; but the difficulty is much increased with new-born children. In such instances, a close and accurate examination is required, founded on the distinctions already laid down, so far as they are applicable.*

* I am much indebted, on this subject, to the articles *Generation* in Rees' Cyclo-

The English common law on this subject, and which of course is binding in this country, is thus laid down by Blackstone and Coke. "A monster having deformity in any part of its body, yet if it hath human shape, may inherit."* And "every heir is either a male or a female, or an hermaphrodite, that is both male and female. And an hermaphrodite (which is also called androgynus) shall be heir either as a male or female, according to that kind of sex which doth prevail; and accordingly it ought to be baptized."† The same rule, he observes, (*hermaphrodita tam masculo quam feminæ comparatum secundum prævalescentiam sexus incalescentis*,) guides in cases concerning tenant by the curtesy.‡

I prefer subjoining the views of Mr. J. G. St. Hilaire on Hermaphroditism, to incorporating them in the body of this chapter. They are taken from an analysis of his work in the New Edinburgh Philosophical Journal, vol. 15, p. 298; and the Lancet, N. S. vol. 12, p. 48.§

M. St. Hilaire divides the generative apparatus into six different portions or segments, three on a side, which in several respects are independent of each other. 1 and 2. The deep-seated organs, testicles and ovaries. 3, 4. The middle organs; womb or prostate, and vesiculæ seminales. 5, 6. The external organs, penis and scrotum, clitoris and vulva.

When the number of these parts is not changed, and there is simply a modification in their developement, we have the FIRST CLASS, or *hermaphroditism without excess*. This again is subdivided into four orders: 1. *Male hermaphroditism*, when the generative apparatus, essentially male, presents in some one portion the form of a female organ—as a scrotal fissure, resembling in some respects a vulva. 2. *Female H.* where the apparatus, though essentially female, yet offers in some one portion the form of a male organ, as in the excessive developement of the clitoris. 3. *Neutral H.* when the portions of the sexual apparatus are so mixed up, and so ambiguous, that it is impossible to ascertain to

pedia, and *Hermaphrodites* in Brewster's. The former is an elaborate and able production, from the pen of Mr. William Lawrence. See also the article on this subject by Marc, in the Dictionnaire des Sciences Medicales, vol. 21; and for some discussions on the Theory of Hermaphroditism, by Dr. Knox, of Edinburgh; see Dr. Brewster's Journal of Science, N. S. vol. 2, p. 323.

* Blackstone, 2, 247.

† Coke Littleton, 8, a.

‡ Do. 29, b.

§ See also Medico-Chirurg. Review, vol. 31, p. 114.

what sex the individual belongs. 4. *Mixed H.* when the organs of the two sexes are actually united and mixed in the same individual. Of this there are several species: *Alternate*, when the deep organs belong to one sex, and the middle to the other, while the external present a mixture of both. *Lateral*. In this, the deep and middle organs, when viewed on one side of the median line, appear to belong to the male sex, while on the other they are female; the external organs, as in the former species, are partly male and partly female. *Hemilateral*. *Interchanging*.

The **SECOND CLASS** includes all anomalies with excess of parts, and is divided into three orders: 1. *Complex Male H.* where we find, with an apparatus essentially male, some supernumerary female organ, as a uterus, &c. 2. *Complex Female H.* with the addition of a male organ, as a testicle, &c. to an apparatus essentially female. 3. *Bisexual H.* where a male and female apparatus exist in the same individual. M. St. Hilaire allows, however, unequivocally, that the external organs (as a penis and clitoris) have never been found perfectly double. "The researches of modern anatomists have completely set at rest the long debated question of hermaphroditism, in the vulgar acceptance of the word. It is anatomically and physiologically impossible."

"With respect to legal medicine, it is sufficient for me to point out here," says the author, "the insufficiency of the precepts given by authors for the determination of the sex in doubtful cases—precepts which have appeared exact, only because there had been but a very few of the combinations distinguished which nature presents. This difficulty in distinguishing the sex, is the consequence of the general fact, that while the internal organs vary almost to infinity in number, structure and arrangement, (being either *internal male—internal female—a double set* of organs, which are male and female—or finally *ambiguous*, being neither male nor female,) the external ones preserve their normal number; and the modifications which they present in other respects, being intermediate between the male and female sexes, are included within limits sufficiently narrow. It is then impossible that a particular arrangement of the external organs could correspond to each of the special combinations of the internal organs."

Lastly, the author remarks, that legislation, admitting only two grand classes of individuals, on whom it imposes duties,

and grants different and almost opposite rights, according to their sex, does not truly embrace the entire of the cases; for *there are subjects who have really no sex*, such as neuter hermaphrodites, and hermaphrodites mixed by superposition; and on the other hand, certain individuals, the bisexual hermaphrodites, who present the two sexes united in the same degree.*

If the reader will compare this analysis with the accompanying chapter, he will readily observe in what respects the observations of M. St. Hilaire are to be deemed original. So far as they relate to legal medicine, distinct from the mere enunciation of facts, we may presume that little or no improvement can be made in our existing law, unless the mixed class be actually precluded from the power of inheriting.

* A remarkable case of this description, which occurred in Paris, to Prof. Bouillaud, the editor of the *Journal Hebdomadaire*, is given from that journal in the *Lancet*, N. S. vol. 12, p. 60; and *Medico-Chir. Review*, vol. 23, p. 237. The subject, aged sixty-two, and a widower, who died of cholera, was apparently a male; yet on dissection, a womb with its ovaries was found. There was a perfect prostate gland. The testicles, vesiculæ seminales, and vasa deferentia were wanting. The penis had a well formed glans and prepuce. A vagina of about two inches long, connected the uterus with the urethra. The external genital organs of the female were entirely absent; but the general conformation (except a thick but soft beard) inclined to that sex.

Geoffroy St. Hilaire and Manec observe on this case, that "We must distinguish the organs of reproduction, and those of mere copulation; there may be an amalgamation or co-existence of the latter, but not of the former."

CHAPTER V.

RAPE.

1. Signs of virginity—opinion of anatomists concerning them. 2. Signs of defloration and rape; diseases that may be mistaken for the effects of violence; value to be attached to external injuries as proof. Possibility of consummating a rape. False accusations. Appearances when death has followed violation. Case of Mary Ashford. 3. Laws of various countries as to the violation of children under ten years of age. Credibility of witnesses in these cases. Laws of various countries concerning the punishment of rape. Discussion as to the circumstances which constitute the crime in law. Diversity of decisions in England and this country. Late English law defining them, with decisions under the same. 4. Whether the presence of the venereal in the female should invalidate her accusation. Of rape during sleep, without the female's knowledge. Of pregnancy following rape. Law on this point. Of pregnancy following defloration.

No case can occur, in which public feeling is more warmly or justly excited, than where an attempt is made to injure or destroy the purity of the female. According to our system of laws, the testimony of the insulted individual is sufficient to condemn the criminal; yet notwithstanding this correct disposition, it not unfrequently occurs, that the opinion of the physician is required, in order to elucidate various difficulties connected with the accusation. I shall, therefore, follow the plan pursued by all systematic writers on this subject, and commence with a notice of the signs of virginity. A knowledge of these is generally required in cases where children of a tender age have been abused; and again, they need to be known in those instances, where malicious charges have been made by abandoned females. No remark can be more correct than that of Sir Matthew Hale, concerning this crime: "It is an accusation," says he, "easy to be made and harder to be proved, but harder to be defended by the party accused though innocent." The signs of rape will necessarily form the second division; thirdly, the laws of various countries on that crime, and lastly, an examination of some medico-legal questions connected with the subject.

1. The physical signs of virginity have been the subject of keen discussion among anatomists and physiologists, and none of them has led to greater inquiry, than the *existence of the hymen*. This is understood to be a membrane of a semilunar, or occasionally of a circular form, which closes the orifice of the vagina, leaving however an aperture sufficiently large to permit the menses to pass.* A great difference of opinion has existed concerning its presence. Some distinguished physiologists have denied its existence altogether, or in the cases where it is found, consider it a non-natural or morbid occurrence. Among these, may be enumerated, Ambrose Paré, Palfyn, Pinæus, Columbus, Dionis, and Buffon. "Columbus," says Zacchias, "did not observe it in more than one or two instances; and Fallopius, in not more than three females out of thousands whom he dissected."† "Paré," says Mahon, "considers the presence of the hymen as contrary to nature; and states, that he searched for it in vain in females from three to twelve years of age."‡ Those on the contrary, who, from dissection, have believed in its presence previous to sexual intercourse, or some other cause destroying it, are Fabricius, Albinus, Ruysch, Morgagni, Haller, Diemerbroek, Hiester, Riolan, Sabatier, Cuvier, Blumenbach, and I may add Denman. Haller appears to have observed it in persons of all ages.§ Cuvier has not only found it in females, but has also observed a fold answering to it in mammiferous animals and thus gives strong evidence of its existence by analogy.|| Gavard, who appears to have dissected a great number of subjects at the *Hospital de la Salpêtrière*, and also at the dissecting room of Desault, states that he constantly found this membrane in the fœtus, and in children newly born. In others of a more advanced age he also observed it; and in particular in a female fifty years

* Dr. Gross states, that in the majority of cases observed by him, it was of an oblong oval shape. *Western Journal Med. and Phys. Sciences*, vol. 10, p. 56.

† Zacchias, vol. 1, p. 376.

‡ Mahon, vol. 1, p. 118.

§ "Ego quidem in omnibus virginibus reperi, quarum aliquæ adultæ erant ætatis, neque unquam desideravi, neque credo a pura virgine abesse. Vidi hymenem bis in fœtu, sexies in recens nata, bis in puella aliquot septimanarum, ter in annua, semel mense 18, semel in bimula, bis in sexenni, semel in decenni, semel in 14 annorum puella, semel in alia 17 annorum, semel in vetula." (*Elementa Physiologiæ*, tom. 7, pars 2, p. 95 and 97.) Some satirical remarks by Michaelis on the German anatomists finding this membrane, and the French denying its existence, may be found in his *Commentaries*, vol. 1, p. 482. He quotes also the opinion of Roederer and Wrisberg in favour of its presence, and also of its being a sign of virginity.

|| See on this point, Godman's *Anatomical Investigations*, p. 72, &c.; Lawrence's *Lectures on Physiology*, London edition, p. 174.

old, whom he was called to sound, he found it untouched; so also, in another, whom he attended with Professor Dubois.*

The weight of testimony is thus evidently in favour of the affirmative of this question; and the general sense of the profession is certainly decidedly opposed to considering it as a non-natural appearance. The following circumstances, however, require to be noted, before we form an opinion concerning it as a sign of virginity. *It may be wanting from original mal-conformation, or it may be destroyed by disease or some other cause, and yet the female be pure.* Thus the first menstrual flux, if the aperture be small, may destroy it—or an accident, as a fall†—or disease, as for example, an ulcer, may totally obliterate it. There have certainly occurred instances, where the pressure of the confined menstrual fluid has produced its destruction. Again, in the place of the hymen, are sometimes found the *carunculæ myrtiformes*. Tolberg, according to Foderé, and also Belloc, have made this observation on dissection. They were, however, round, and without a cicatrix, and in this respect very distinct from the organs usually so termed.‡ *This membrane may, on the other hand, be present, and yet the female be unchaste; nay, she may become pregnant without having it destroyed.* Zacchias remarks, that it will not be ruptured when it is thick and hard. A disproportion between the organs, or connexion during the presence of menstruation, or fluor albus, are also mentioned by him. Gavard, whom I have already mentioned, found it perfect in a female of thirteen years of age, who was labouring under the venereal.§

In those cases where this membrane is found thickened, an

* Foderé, vol. 4, p. 339. In a report by L. Senn, of La Maternité at Paris, on the condition of the genital organs at birth, he states that in examining between three and four hundred children from two to four years of age, he did not fail in a single instance to find the hymen. Dewees' Midwifery, 3d edition, p. 48.

“Nous ajouterons que tous les anatomistes modernes ne mettent plus en doute l'existence de l'hymen.” Devergie, vol. 1, p. 340.

† Or as in the following case of a young woman admitted into St. Thomas' hospital, in July, 1828, under the care of Dr. Elliotson. She stated, that about six months previous, she was lifting a person out of a coach, when she suddenly felt intense pain in the back, and the uterus descended and protruded beyond the os externum. The descent was accompanied by profuse hemorrhage. She recovered and was married, and now came in for prolapsus uteri. She declared, that before her marriage, she was intact, and Dr. E. remarked on this, that a lesion of the hymen may result from internal, as well as from external causes. (Lancet, N. S. vol. 2, p. 734.)

‡ Foderé, vol. 4, p. 343. Belloc, p. 45.

§ Foderé, vol. 4, p. 340. Ricord, Surgeon to the Venereal Hospital at Paris, mentions a similar case. (Monthly Journal Medico-Chirurgical Knowledge, No. 2, p. 37.)

operation has often been necessary. Paré relates of a mother who applied to him to examine it; and on dividing it, it was seen to be of the thickness of parchment.* A similar case happened to Ruysch, of a female during labour, in whom he had not only to divide the hymen, but also another non-natural membrane placed farther back. Immediately after the operation, the child was born.† Baudelocque, Mauriceau, Denman, and other writers on midwifery, adduce many instances illustrating the same fact.‡

These observations certainly lead us to doubt whether the presence or absence of the hymen deserves much attention; and I believe the opinion of physiologists generally is, that it is an extremely equivocal sign. I am, however, unwilling to go as far as most of the later writers on legal medicine, who virtually reject it altogether. While it must be allowed that it can very often be destroyed by causes which do not impair the chastity of the

* Mahon, vol. 1, p. 118.

† Fodéré, vol. 4, p. 340. See also vol. 1, p. 389, 390, for similar and even more extraordinary cases.

‡ Capuron states, that a few years ago, he divided this membrane in a female during labour, and in a short period she was delivered of living twins. (P. 32.)

The following extract from so experienced a practitioner as Baudelocque, has some incidental interest: "It is well known that the hymen is not always torn in the first connexion, and that it has been found entire in some women at the time of labour. I can myself adduce two examples." The first was in a young lady, who assured him that she had merely permitted the semen to be shed on the interior parts of the vulva, and did not allow the complete act. Here the hymen bound the vagina very closely, and left but a very small opening. She notwithstanding became pregnant, and the parts were found thus at labour.—In the other, the membrane alone resisted, for half an hour, all the efforts of the last periods of delivery. Midwifery, v. 1, p. 217.)

Additional cases are recorded, by Mr. Brennard, (London Medical Repository, vol. 21, p. 398.)

By Dr. Blundell, an eminent lecturer on midwifery in London. "Four impregnations," (says he,) "in which the hymen remained unbroken, have fallen under my notice; the diameter of the vaginal orifice not exceeding that of the smaller finger, and this too though the male organ was of ordinary dimensions. And again, "I know of three cases in which the male organ was not suffered to enter the vagina at all, and where nevertheless, I suppose from the mere deposition of the semen upon the vulva, impregnation took place." See his Lectures in the Lancet, N. S. vol. 3, p. 259, 260; vol. 4, p. 708.

By Dr. Davis, particularly a case of cribriform, hymen, Obstetric Medicine, p. 104, 105, 110.—By Dr. Kennedy, p. 31.

By Dr. Montgomery, Cyclopaedia of Practical Medicine, vol. 3, p. 495, Art. *Pregnancy*. He quotes two cases, which deserve mention at least in this place. One is from Marc, (Art. *Violation*, in the Dictionnaire des Sciences Médicales.) A young female, severely afflicted with syphilis, was brought to La Pitié. The hymen was altogether wanting; the vagina greatly dilated, and the external genitals diseased. She was cured; and to the astonishment of the medical observers, a well-formed semilunar hymen was found.—The other is from Nysten: A young girl, aged thirteen, had ovarian pregnancy, but had never menstruated: the vagina was much contracted, and the hymen was perfect!!

female, we are justified, I think, in attaching considerable importance to its presence.* It would be difficult to support an accusation of rape, where the hymen is found entire.† I feel therefore justified in retaining it among the signs of virginity, although it should always be considered in connexion with other physical proofs.‡

2. *Narrowness of the vagina.* In children, this part is extremely small; but it increases in size as they approach to the age of puberty. At that period, the development produced by the determination of blood to the sexual organs, causes a turgescence and enlargement, which naturally place the parts in closer contact. In chaste females, also, rugæ are observed on the inner surface of the vagina; and these are removed by frequent connexions, and destroyed by one or two deliveries.

But we cannot place much reliance on this as a sign. It is evident, that it must vary with the age of the individual, the temperament and the state of health. In those of a sanguine habit, the parts will be most contracted, while on the other hand, if fluor albus or menorrhagia be present, there will be great dilatation. Parent-Duchatelet informs us, as the result of actual inspection, that the genital organs of many prostitutes, some indeed

* Dr. Thomson censures me for retaining this sign, but it must be understood, that I go not farther, than to say, that its *presence should be regarded*. Such, if I understand him, is also his own opinion.

† Smith, p. 397. A case is, however, given in East's Crown Law, (1, 438,) where two surgeons swore that the hymen was entire. "But as this membrane was admitted to be in some subjects an inch, in others an inch and a half, beyond the orifice of the vagina, Ashurst, J. left it to the jury, whether any penetration was proved: *for if there were any, however small*, the rape was complete in law. The jury found the prisoner guilty." In this case, the female was ten years of age, and the parts were stated to be so narrow that a finger could not be introduced. This decision was, however, at variance with the evidence usually required in such cases in England; and according to the present statute law of that country, (see section 3 of this chapter,) it would hardly be again made. On the trial of Gammon, for a rape on a child under ten years of age, Mr. Woollett, a surgeon, stated that he found considerable local inflammation about the parts of the child; that the hymen had been recently ruptured, and that he had no doubt that penetration had taken place. Baron Gurney, who presided, observed, "I think, that if the hymen is not ruptured, there is not a sufficient penetration to constitute this offence. I know that there have been cases in which a less degree of penetration has been held to be sufficient, but I have always doubted the authority of these cases; and I have always thought, and still think, that if there is not a sufficient penetration to rupture the hymen, it is not a sufficient penetration to constitute this offence." (5 Carrington and Payne's Reports, 321. *Rex v. Gammon*.)

‡ "In examining for the hymen in cases of rape, or for purposes of professional opinion or treatment in many other cases, it will be necessary to separate the labia, and even the thighs, to a considerable distance from each other, before the hymen, in the event of its being present, can be distinctly seen." (Davis's Obst. Med. p. 99.)

of advanced years, cannot be distinguished from those of the virgin state. And the inference drawn is "that degrees of amplitude and straitness of the vagina are, to many women, a natural and congenital state."*

3. I have already mentioned, that in the place of the hymen, certain fleshy tubercles, termed *carunculæ myrtiformes*, have been observed by anatomists; and shall now add, that a variety in their appearance has been considered indicative of chastity or unchastity. Zacchias remarks, that in the former they are red, tumid, and connected together by fleshy cords; but in married women (being situated at the entrance of the vagina) they are found pale, flaccid, and the cords torn asunder.† They are generally considered as the remains of the hymen, "*et corruptæ adeo pudicitie indicia*." They are then found thick, red, and obtuse at their extremities, somewhat resembling a myrtle-berry; and from this supposition their name is derived. They generally disappear after frequent connexions or deliveries.

It has, however, of late years been asserted, with positiveness, that the *carunculæ* and the hymen may be co-existent. Of this opinion, are Dr. Hamilton of Edinburgh, Dr. Blundell and Dr. Conquest; all, as it would seem, from actual observation.‡

In addition to the above, various signs have been enumerated by authors. These I will barely state, and refer the inquirer for more minute details to works on anatomy and midwifery. Pain during the first connexion, is deemed a proof; although the presence of menstruation or of disease may prevent this in many

* Edinburgh Med. and Surg. Journal, vol. 47, p. 225. "On m'a fait remarquer un jour, dans la prison de madelonnettes, une fille de 51 ans, qui, depuis l'âge de quinze ans, se livrait dans Paris à la prostitution, et dont les parties genitales auraient pu être confondues avec celles d'une vierge sortant de la puberté." Parent-Duchatelet. De la Prostitution, 1, 215.

† Zacchias, vol. 1, p. 378.

‡ Ramsbotham's Lectures in London Med. Gazette, vol. 13, p. 182; Blundell's Lectures in Lancet, N. S. vol. 4, p. 641; Conquest's Outlines, p. 17; Merat (Dict. Des Sciences Med. vol. 35, p. 143) is of the same opinion. Orfila, however, states, that in more than two hundred dissections made by him of females from two to fourteen years of age, and in whom, of course, the hymen was present, he could not detect the presence of the *carunculæ*.

Velpeau says that the difference of opinion that exists, may be settled by what he deems his own discovery: "Four *carunculæ* are commonly observed at the entrance of the vulvo-uterine canal, and which correspond to the four extremities of the respective diameters of this opening. Two of these, viz. that which is near the meatus and that which is near the fourchette belong to the middle columns of the vagina, while the other two only are the remains of the hymen. They may thus co-exist." He calls these last *lateral caruncles*. (Midwifery, p. 55.)

cases: so also blood from the rupture of the hymen.* The red and tumid appearance of the labia and nymphæ, and the rupture of the fourchette, are each extremely uncertain signs, since the latter does not generally occur until delivery, and the former may be present in the unchaste.

It should be observed with respect to the signs last enumerated, that although they may be present notwithstanding the unchastity of the female, yet their absence is a proof against her. If the labia and nymphæ have the appearance which indicates previous connexion; if the fourchette be ruptured, and the fossa navicularis obliterated, the only deduction we can draw, must be an unfavourable one. Capuron, a disbeliever in the physical signs, indeed suggests, that a foreign body, such as a pessary, introduced with too much violence into the vagina, may have ruptured the fourchette; or the menstrual fluid, by becoming acrimonious, may have eroded it.† Both these suggestions are, however, equally improbable, and deserve little attention in forming a general rule.

Systematic writers have added to these, other signs, but they are generally equivocal. The bright red colour of the nipples, the hardness of the breasts, and in fine, the general appearance of the female, all deserve attention, but can seldom be of any practical utility in determining on the point under examination.

From the above statement, an opinion may be formed concerning the dependence that is to be placed on the physical signs of virginity. It is not to be denied, that many may be equivocal; but, notwithstanding, it is the duty of the medical examiner to notice them, and that, *in connexion with one another*. It cannot be possible that all those which we have mentioned as present during the chaste state, can be wanting, without justifying a strong suspicion against the female. Midwives should always be associated with physicians in such cases; and they would be the proper examiners, provided their information and knowledge of the system were sufficiently extensive. It is also necessary to recollect that these appearances are most striking in females of a tender age; and as a general rule, guided however by the cli-

* This is indicated in the Jewish law. The curious will find some extraordinary discussion on this point in Zacchias, vol. 1, p. 376, and Michaelis, vol 4, p. 192 to 199.

† Capuron, p. 29.

mate and the habit of the body, they are found most perfect in females not farther advanced in life than twenty or twenty-five years of age.*

II. *Of the signs of defloration and rape.*

The marks of defloration, i. e. of connexion without violence, are of course the reverse of those which we have stated in the preceding section. It is not necessary to recapitulate them in this place; but it is proper to observe, that they will most readily be seen, if the examination be made within a very short period after the event complained of: and again, the most striking proofs will occur where it has been the first connexion on the part of the female. Here the parts are generally found bloody, inflamed and painful.† Marks of a rupture of the hymen, or a disunion of the carunculæ, will also be present, together with an extreme sensibility to the touch, a sensation of heat, and a difficulty in walking. In married women, or libidinous females, the detection is more difficult, and in truth, in a great degree impossible, and that whether they accuse or are accused. The reasons for this will readily suggest themselves.

By the term *rape*, however, is understood not only defloration, but a commission of it against the will of the female; and again, the commission of this violence against a person of a tender age, who has as yet, in the legal sense of the term, no will. Here not only the signs of defloration already enumerated will be present, but also others indicative of the employment of force, such as contusions on various parts of the extremities and body. These, however, are compatible with final consent on the part of the female.

It also deserves attention, that disease has produced the appearance of external injury, and led to suspicions against inno-

* The following remark of Foderé on this subject, deserves quotation: "Having often been engaged in such examinations, and finding the above named physical signs of virginity wanting, I have declared the female unchaste; and the pangs of child-birth have in a few months confirmed my decisions although they were considered harsh at the time." (Vol. 4, p. 352.) We must, however, add, that the faculty of medicine at Leipsic declared, that there does not exist any true and certain sign of virginity, (Metzger—notes, p. 483,) and Morgagni is of a similar opinion. (Opuscula Miscellanea, p. 37.)

† It is important not to mistake the menstrual secretion, or blood placed on the parts for the effects of violence. Dr. Campbell of Edinburgh, detected a case of pretended rape, by finding a stocking wire, covered with blood in a dried state, which had been applied to the vagina. (Midwifery, p. 53.)

cent persons. Dr. Percival relates a case of serious importance in medico-legal investigations. Jane Hampson, aged four, was admitted an out patient of the Manchester Infirmary, Feb. 11, 1791. The female organs were highly inflamed, sore, and painful; and it was stated by the mother, that the child had been as well as usual, till the preceding day, when she complained of pain in making water. This induced the mother to examine the parts affected, when she was surprised to find the appearances above described. The child had slept two or three nights in the same bed with a boy fourteen years old, and had complained of being very much hurt by him during the night. Leeches and other external applications, together with appropriate internal remedies, were prescribed; but the debility increased, and on the 20th of February the child died. The coroner's inquest was taken; previous to which, the body was inspected, and the abdominal and thoracic viscera found free of disease. From these circumstances, Mr. Ward, the surgeon attending this case, was induced to give it as his opinion, that the child's death was caused by external violence; and a verdict of murder was accordingly returned against the boy with whom she had slept. Not many weeks elapsed, however, before several similar cases occurred, in which there was no reason to suspect that external violence had been offered, and some in which it was absolutely certain that no such injury could have taken place. A few of these patients died. Mr. Ward was now convinced that he was under a mistake in attributing the death of Jane Hampson to external violence, and informed the coroner of the reasons which induced this change of opinion. Accordingly, when the boy was called to the bar at Lancaster, the judge informed the jury, that the evidence adduced was not sufficient to convict; and that it would give rise to much indelicate discussion, if they proceeded to the trial; and that he hoped, therefore, they would acquit him, without calling witnesses. With this request the jury immediately complied. The disorder in these cases, says Dr. Percival, had been a typhus fever, accompanied with a mortification of the pudenda.*

* Medical Ethics, p. 103 and 231. Capuron relates two cases of children, the one aged four, and the other six years; both of whom were affected with a white and very acrid discharge from the vagina, accompanied with swelling of the external parts, severe pain, and indeed ulceration; a high fever was also present. In one instance,

A complaint resembling the above in many respects, has also been lately described by Mr. Kinder Wood. It is preceded by all the ordinary symptoms of fever for about three days. The patients then call the attention of parents to the seat of the disease, by complaints in voiding urine, &c. When the genital organs are examined, one or both labia are found enlarged and inflamed. The inflammation is of a dark tint, and soon extends internally over the clitoris, nymphæ and hymen. Ulceration succeeds, and the external organs of generation are progressively destroyed. This affection has proved very fatal, and seems to constitute a peculiar kind of eruptive fever.*

Mr. William Lawrence, in his Lectures on Surgery, when speaking of this disease, mentioned that he had been called as a witness in such a case at the Old Bailey, on a capital indictment. The idea was that the complaint was syphilis. He remarks, that "there is an excessively deep-coloured inflammation, with great disturbance of the health of the child, in the very commencement of the affection; and the ulceration that succeeds is foul and sloughing, and of a tawny colour, totally different from the character of any primary venereal sore."†

It is of great importance that the physician understand the possibility of such diseases occurring: "but we must take care not to run into the opposite error of ascribing inflammation,

the parents loudly declared that violence must have been used towards their child. Prof. Capuron, however, ascribed both to an epidemic catarrhal affection then prevalent in Paris, and considered the local complaint as entirely dependent on it. By the use of proper regimen, they readily recovered. (Pages 41 and 42.)

"Judging from my own experience in a large town, cases like those related by Capuron are by no means unfrequent. I have met with at least a dozen during the last five or six years, principally in children four or five years of age. They have been various in the severity of the symptoms, and in their duration, but have always terminated favourably." DARWALL.

* *Medico-Chirurgical Transactions*, vol. 7, p. 84. Out of twelve cases seen by Mr. Wood, only two appear to have recovered. See also *Quarterly Journal of Foreign Medicine*, vol. 2, p. 224; *Lancet*, N. S. vol. 1, p. 874; *American Journal of Med. Sciences*, vol. 2, p. 468; *North of England Medical and Surgical Journal*, vol. 1, p. 479. (Cases by Mr. Dunn, of mumps combined with leucorrhœal discharge.) Sir Astley Cooper says that he has seen at least thirty cases of this discharge in one year. (*London Medical and Surgical Journal*, vol. 4, p. 48.) Additional cases are mentioned by Dr. Beatty as occurring in Dublin, and where charges of rape were about to be made. (*Cyclopedia of Practical Medicine*, Art. *Rape*.) Also by Dupuytren, *Medico-Chirurgical Review*, vol. 25, p. 524; *North American Archives*, vol. 1, p. 201.

† *London Medical Gazette*, vol. 6, p. 828. A similar case occurred in London in 1829, where the prisoner was convicted of an assault, and sentenced to six months' imprisonment. Dr. Gordon Smith and others interested themselves in the man's behalf, and showed that it was disease, instead of the result of violence. (*London Medical and Surgical Journal*, vol. 4, p. 48.)

ulceration and discharge, in cases where violence has been alleged, to this disease, without sufficient grounds; *for it is extremely improbable that diseases which occur so rarely, should happen to appear in a child to whom violence was offered, unless that violence had some effect in producing it.*"* The proper distinction to be made in these cases undoubtedly is, not to attribute laceration, tumefaction, and consequent inflammation to this disease. It resembles gonorrhœa, and the examination of the person suspected, if early made, will lead to a definitive opinion.† Marks of external injury are hence to be considered as *corroborating*, but not as *certain* proofs of the commission of a rape. The weight which they deserve, depends on several circumstances which it is proper to notice.

1. *The age, strength, and state of mind of the respective parties.* However we may doubt whether a rape can be committed on a grown female, in good health and strength, (and this point I shall presently notice) yet there can be no question but that it can be perpetrated on children of a tender age. Previous to the age of sixteen, or rather before the period of menstruation, the female is not only deficient in strength, but is also ignorant of the consequences of the act; and fear may induce her to consent to libidinous desires. Again, should a female accuse a man who is cachectic, or a valetudinarian, little credit is to be given to her charges; as the respective strength of the parties will show the improbability of the commission of the act. For a similar reason, the probability is increased when the accused is vigorous, and the accuser infirm; and above all, should the female labour under imbecility of mind to such a degree as to render her incapable of judging concerning the morality of her actions, her age ought not to be taken into account. An individual of this description at twenty-five, is less capable of resistance than

* Edinburgh Medical and Surgical Journal, vol. 13, p. 491.

† Beatty in Cyclopedia of Practical Medicine, Art. *Rape*.

In cases of young children, supposed to have been violated, it will be well to remember an observation made by Devergie and verified in repeated examinations of healthy subjects. And this is, that at a tender age, the labia are at a much greater distance from each other at the upper part, than in more advanced years. The opening was in repeated instances found to be triangular, and to expose the clitoris. Devergie, vol. 1, p. 338.

"Il est vrai que l'acte du coit est rarement entierement consommé chez les tres jeunes enfans; nous avons vu dans plusieurs circonstances, des jeunes filles ayant été pendant assez long temps en but à des tentatives de viol, presenter le perinée en entonnoir refoulé en—dedans, c'est à dire, rentrant vers le vagin, son orifice un peu enlargi et écarté en bas." Leuret, in Annales d'Hygiène, 16, 446.

another of sound mind and body at fourteen. We must also add, that all accusations against persons aged above sixty years of age, should, as a general rule, be rejected; and if maintained, the accuser should prove the presence of greater strength and virility than is the ordinary lot of that period of life.*

2. A comparison of the sexual organs may be necessary; since cases have occurred in which the male has proved impotency or defective organization, or has exhibited proofs of the destruction of parts by the venereal disease. In the female, however, it must be remembered, that it will be difficult to find the physical marks of rape, provided she is subject to the diseases formerly enumerated, or has had several children. In opposite cases, severe marks of the violence will be more evident; and these have sometimes been of the most striking kind, inducing, in one instance, according to Teichmeyer, great inflammation, and an incurable paralysis of the lower extremities.†

3. A speedy examination of the parts is all important in disputed cases. The body of the male should also be inspected, whether there be scratches or bruises on it.‡

I have intimated, that doubts exist whether a rape can be consummated on a grown female in good health and strength. It has been anxiously inquired, whether this violence, if properly resisted, (and this is included in the very definition of rape,) can be completed? And in the consideration of this, it is needless to observe, that those cases, in which insensibility by violence or soporifics, has been previously produced, or where many are engaged against one female, are of course excluded.§ Some hesitation is doubtless proper in deciding on a question of this magnitude. The opinion of medical jurists, generally is very decisive against it. “En un mot,” says Mahon, “d’apres la con-

* I have known (says Prof. Amos) a person aged sixty, left for execution for a rape; and in 1803, a youth aged seventeen, was convicted of it on a girl of nine and executed. (London Medical Gazette, vol. 8, p. 33.)

† MS. Notes of Stringham’s Lectures.

‡ “The great points to be looked to” (says Mr. Alison) “are, 1. Whether they made resistance and cried out, *before* they were discovered. 2. Whether they had received *blows and actual injury*, it being quite certain, that at least that violence was inflicted against the will.” (Principles of the Criminal Law of Scotland, p. 187.)

§ We must however remember, that the administration of soporific drugs, for the purpose of the commission of the crime, will justify the charge of rape. This was the case of Luke Dillon, at Dublin, 1830, who was convicted and exchanged execution for transportation, only at the earnest solicitation of the female and her relations. (Alison, p. 213.)

naissance physique que les médecins ont de l'homme et de la femme, relativement à cet attrait impérieux qui porte invinciblement les deux sexes l'un vers l'autre, d'après surtout l'impossibilité presque entière où est un homme seul de forcer une femme à recevoir ses caresses, on doit rarement ajouter foi à l'existence du *viol*, je crois même qu'il seroit prudent de ne l'admettre que lorsque plusieurs hommes armés se sont réunis pour commettre ce crime."* "An attempt," says Farr, "under which is to be understood, a great force exercised over a woman to violate her chastity, but where a complete coition is prevented, may be possible. But the *consummation* of a rape, by which is meant a complete, full, and entire coition, which is made without any consent or permission of the woman, seems to be impossible, unless some very extraordinary circumstances occur. For a woman always possesses sufficient power, by drawing back her limbs, and by the force of her hands, to prevent the insertion of the penis, whilst she can keep her resolution entire."† "Indépendamment de l'arme que la loi met dans la main de la femme pour repousser l'injure, elle a infiniment plus des moyens pour se défendre que l'homme n'en a pour attaquer, ne fut ce que le mouvement continuel." And again, "J'estimé qu'une personne du sexe, qui a atteint l'âge de dix-huit à vingt ans, ne peut plus être prise par force par un homme seul, quel qu'il soit, à moins de la menace d'une arme meurtrière, et que la crainte de la mort ne soit plus forte que celle de perdre l'honneur."‡ Metzger only allows of three cases in which the crime can be consummated—where narcotics have been administered—where many are engaged against the female—and where a strong man attacks one who is not arrived to the age of puberty.§

Notwithstanding these united authorities, it may with justice be supposed, that in addition to the cases allowed, fear or terror may operate on a helpless female—she may resist for a long

* Mahon, vol. 1, p. 136.

† Farr, p. 41 and 42.

‡ Foderé, vol. 4, p. 359, 360. Capuron advances the same opinion, p. 54; and Brendelius, p. 96.

§ Metzger, p. 255. I must add to the above the following answer given by the medical faculty of Leipsic, to the question, whether a single man could ravish a woman. "Si circumstantias quæ in actu coeundi concurrunt, consideramus, non credibile, nec possibile videtur, quod unus masculus nubilem virginem (excipe impubem teneram, delicatam, aut simul ebriam puellam) absque ipsius consensu, permissione, atque voluntate vitare, aut violento modo stuprare possit; dum femina cuilibet facilius est, si velit, penis immissionem recusare, vel multis aliis impedire, quam viro eidem invito planè intrudent." (Valentini Pandectæ, vol. 1, p. 61.)

time, and then faint from fatigue, or the dread of instant murder may lead to the abandonment of active resistance.*

Cases in which false accusations of rape have been made against individuals, are scattered through most of the works on medical jurisprudence.† I shall quote one, both from its having happened not long since, and also as it shows the course pursued in such instances in France. A female at Martigues, in 1808, accused eight or ten of the principal persons in the place, of having violated her grand-daughter, aged about nine years and a half, at an inn. She laid her complaint before the justice, (*juge de paix*;) but stated that she would withdraw it, provided the accused would accommodate the matter with her. She had procured a daughter of the innkeeper, aged sixteen, and an idiot, as a witness. As the charge was obstinately persisted in, Foderé, with two officers of health, was ordered to examine the child in the presence of the judge; and suspicion was immediately excited, from the delay used in admitting the visitors. On examining the parts, he found the hymen untouched, and the vagina

* I am aware, that in the previous edition I spoke too strongly and exclusively, and I fully recognise the correctness of Dr. Ryan's criticism. (*Midwifery*, p. 157.) In a trial at Edinburgh, in 1828, where the counsel for the prisoner did me the honour to quote this work, and the opinion now under consideration, the Lord Justice Clerk, in his charge to the jury, in reply to the argument, that there could be no rape without assistance, blows, or drugs, showed that, a case had occurred in 1811, "where the woman swore that she was overcome on the sands, there being no others near. There was no proof of blows, but her evidence was confirmed by persons who had been looking in that direction with a spy-glass, and the man suffered the last punishment of the law." (*Syme's Justiciary Reports*, p. 332.) I presume, however, that there can be no doubt, in cases like that cited by Professor Amos, of a woman, at Derby, who proved the rape, but on examination, was positive as to the time it had lasted—exactly ten minutes. How did you know it? She had counted. How did you count? One, two, three, &c. Did you count sixty ten times over. I did. (*London Medical Gazette*, vol. 8, p. 35.)

Dr. A. T. Thomson, in his lectures recently published, (*London Medical and Surgical Journal*, vol. 6, p. 647, and *Lancet*, N. S. vol. 19, p. 449,) agrees in the main with the authors that I have quoted. He suggests, that in this struggle "with a healthy female of adult age, who is really anxious to preserve her chastity unsullied, the mind of the man must necessarily be so much abstracted from the act itself, in overcoming the resistance offered to him, and in repelling the attacks of the female upon him, that, independent of corporeal exhaustion, the state of his mind will render it utterly impossible for him ever to effect that penetration which constitutes the criminal intent."

† See the case of one *Stephen Nocetti*, which was referred to *Zacchias*, and where there was an actual deficiency of parts. The accusation was made four months after the supposed commission of the crime. (*Consilia*, No. 34, vol. 3, p. 62.)—Also the case of *Ermínio*. (*Consilia*, No. 41, vol. 3, p. 74.)—Foderé also quotes a case from *Deveaux*, where there was nothing but a slight excoriation of the parts; and of course it was decided that there were no evidences of a rape having been committed. (4, 371.)—I will only add a caution, not to mistake menstruation for the effects of defloration.

extremely narrow. Around the pudenda, however, a red circle about the size of a crown, was observed, which appeared to have been induced recently; and this was indeed the fact; for at the end of half an hour, the circle had decreased in size, and the redness disappeared. Had this been the effect of great violence, it is natural to suppose that it would have increased in intensity of colour. A report was prepared, stating the above facts; and the consequence was, that the accuser was put in prison, and finally ordered out of the city.*

"It happened at an early period of the author's life, in a Welch country town, that a child of about eight years of age, of low connexions and mendacious habits, was induced to prefer against a respectable minister of religion, an accusation of an attempt to violate her person. It was averred on the part of her friends, that she became the subject of ulcerations of the pudendum, in consequence of the imputed assault, and the gentleman in question was committed to prison and confined there for several weeks. The grand jury ignored the bill on the ground that the prisoner had proved himself free from the disease which he had been accused of communicating, and also from other and conclusive moral and circumstantial evidence. The ulcerations on the child's pudendum, were proved not to have been derived from a venereal source."†

Instances sometimes occur, in which death has followed the consummation of a rape, from the violence employed. Here, if the physician be called on to examine the body, he should particularly notice the condition of the sexual organs, both internal

* Fodere, vol. 2, p. 456; and vol. 4, p. 371. The distinction made in Deuteronomy chap. 22, between the commission of the crime *in the city or in the field*, deserves attention in the consideration of this point.

† Davis' Obstetric Medicine, p. 78. Mr. Robertson, of Manchester, mentions a curious case, of a female, found in a field near Warrington, apparently dying in consequence of a rape, as she said, committed on her by two ruffians. Mr. R. found her in a paroxysm of hysteria. She complained of severe pain in various parts of her body, but excused herself, on account of exhaustion, from an examination. Two men were arrested on suspicion, and on being confronted, she immediately identified one as the violator, and he was sent to jail. On further inquiry, however, the injury on the body was found to be slight, while on the inner surface of the pudenda, were simply two slight wounds, such as might have been inflicted by the finger nail. The investigation ended in proving her, on her own confession, to be an impostor, who pretended these injuries, and also admirably imitated the paroxysms of hysteria, for the sake of exciting charity. Whenever she was hard pressed with unpleasant questions, a fit of hysteria came to her relief.

She was tried and punished as an impostor, but succeeded for years afterwards in imposing on individuals. Another of her devices, was suddenly to fall down in labour. (London Medical Gazette, vol. 15, p. 506.)

and external ; and also ascertain whether no proofs are present, from which the exertion of violence may be presumed, such as the introduction of substances into the mouth to prevent crying out, contusions, or dislocation or fracture of the extremities. He should notice whether the labia are dilated and flaccid, the state of the hymen, clitoris, nymphæ and vagina generally, and also whether the fourchette is ruptured. The fluid, (if any be present,) contained in the vagina, should be examined, whether sanguineous, mucous or purulent, and the presence or absence of tumefaction and extraordinary dilatation, should be remarked.*

The case of Mary Ashford, which occurred in England in 1817, is deserving of mention in this place. She was at a ball with the individual (Abraham Thornton) who was accused of first violating and then murdering her. It appears from his confession, that she made an assignation with him. They were seen together in the night, and the next day her dead body was found in a pit of water.

She had on a pair of white stockings at the ball. On her return she changed them for black ones. The white ones were found bloody, in the bundle that she had made up before leaving the house. It was hence probable that she had the menses on her, and this was subsequently confirmed. At the place where the connexion took place, coagulated blood was observed. (There was an evident impression of a human figure on the grass, and this was in the middle of the impression.) Thornton's shirt and the flap of his pantaloons, were bloody. Indeed, he confessed the connexion, but said it was with her consent. Mr. Freer, the surgeon who examined the body, found the parts of generation lacerated, and a quantity of coagulated blood about them. On opening the body, these marks were seen still more manifest, and it was also evident that the menses had been present. In the stomach, he found a portion of duck weed, and about half a pint of a thin fluid, apparently chiefly water. The lacerations (two in number) were quite fresh, and he had no hesitation in asserting, that she was pure, until these occurred. He also stated the distinction between menstrual and non-menstrual blood, and explained that what was observed could not be the former, in con-

* Foderé, vol. 4, p. 372.

sequence of its coagulation. The lacerations might, he said, have occurred with or without consent on the part of the female.

Thornton escaped conviction by an alibi.* There was a considerable difference as to the time of the clocks and watches, and they had not been sufficiently compared. "Less than an hour of additional time," (says Professor Amos,) "would have put an end to the alibi."

It may be considered an omission not to notice the chemical investigations of Orfila, for the detection of semen, if its presence should require to be proved, and I therefore add a brief notice of them.

Semen forms, when dry on linen, irregular spots of a light yellow or grayish colour; but so indistinct, that frequently it is necessary to hold them between the eye and the light to discover their presence. On pressing them with the fingers, the linen appears as if starched. When dry, they are inodorous; but as soon as they are moistened, the spermatic odour is given out. If the linen be gently heated, they assume a yellow fawn colour, and this, indeed, will indicate spots, which otherwise would pass unnoticed. This property is important in distinguishing the discharge. And it is also found, if the linen be left for some time in distilled water, that the above result will not be reproduced on heating it. The semen has become mixed with the water—and no change of colour is occasioned.

In water, the spots become completely moistened; which is not the case, if they have been caused by grease: and on being rubbed, give out their peculiar odour. The fluid itself is of a flocculent, milky appearance, and on being evaporated, is found alkaline, and assumes a mucilaginous appearance; and if the process be continued to dryness, it leaves a semi-transparent residue, resembling gum arabic, and of a light fawn colour. This again is decomposable in distilled water, if the mixture be shaken, into two parts; one soluble, but the other glutinous, insoluble in water, but soluble in potash. The soluble portion yields a white

* 1 Barnewell and Alderson, p. 405, *Ashford v. Thornton*. This case in all its details is given by Dr. Cummin in the *London Med. Gazette*, vol. 19, p. 386. It excited intense interest in England.

Mr. Holroyd (son of the judge who tried Thornton,) suggested in a pamphlet which he published, that her death may have been accidental. Fatigued and exhausted, as she undoubtedly was, she passed before morning along the top of a bank of a very sloping pit-side, and she may have turned faint or giddy and thus fallen in. Dr. Cummin does not think that there was either rape or murder. *Ibid.* p. 390.

flocculent precipitate with alcohol, chlorine, acetate of lead, or corrosive sublimate. Pure nitric acid gives it a slight yellowish tint, *but does not render it turbid.*

Alcohol dissolves but a very trifling portion, if the linen, spotted as above, be left in it for twenty-four hours.

When blenorrhagic matter, obtained from syphilitic females, was treated in a similar manner, the linen took a yellowish green colour, but the spots do not become yellow, when held to the fire. The peculiar odour is wanting, but the solution is also alkaline. When evaporated, the product is of a white yellowish colour, opaque and decomposable by heat. It dissolves with difficulty in distilled water, but alcohol and the other re-agents already named, yield a white precipitate; and *nitric acid also a white one.* Leucorrhœal matter wants many of the characters of the spermatic fluid, and the re-agents cause but a slight precipitate, if it be treated in the same manner as already described. Lastly, spots of saliva sometimes become yellowish, on exposure to the fire; and in some of the experiments of Orfila, the liquid solution that was obtained was unaltered by nitric acid. It is evident from these results, (says Devergie) that we are still in need of more characteristic tests of semen.*

III. *The laws of various countries concerning this crime.*

There are two reflections which are of deep weight in all our investigations on this subject, and which should particularly be kept in mind when noticing the laws concerning it. The nature of the crime, being an offence against the weaker sex, and committed in secrecy. Being of so detestable a character, and so difficult to be proved, the law has wisely ordained that the testimony of the injured person shall be sufficient, unless impeached, to convict the criminal. But again, and this is the second remark, false accusations are frequently made for the gratification of malice and revenge. The scriptures, and the records of courts in all countries, bear testimony to this.† In this point of view,

* Orfila *Leçons*, 2d edit., vol. 2, p. 573, translated by Dr. Gross in the *Western Medical Gazette*, vol. 2, p. 244. Sedillot, p. 93. Devergie, vol. 2, p. 903.

For cases examined under the direction of the public prosecutor in France by Chevallier, see *Annales D'Hygiène*, v. 11, p. 210. *Medico-Chir. Review*, v. 24, p. 516.

† On the trial of Levi Weeks for the murder of Miss Sands, held at New York, March, 1800, the counsel for the prisoner stated, that "in that very city, a young man, not many years ago, had been charged with the crime of rape. The public mind was highly incensed, and even after the unfortunate man had been acquitted

the medical jurist may often aid the ends of justice in punishing the wicked, and absolving the innocent.*

I have thought that a sketch of the laws of various countries concerning this crime might prove interesting, and in some degree useful. The materials for this purpose have been collected in a great measure by Blackstone and Percival, and I have added to these, the laws existing in various states throughout the union. I shall notice, separately, the laws respecting the commission of the crime, on the female of tender age, and on the female who has arrived at maturity.

1. As this crime can be committed with the greatest facility on children under the age of puberty, in consequence of their want of strength, but particularly from their ignorance of the consequences of the act, the law has wisely directed that the consent or non-consent of the female under age is immaterial, "as by reason of her tender age, she is incapable of judgment and discretion."

In the 3d year of Edward I. by the statute, Westminster, the offence of ravishing a damsel within age, (that is, *twelve* years old,) either with her consent or without, was reduced to a trespass, if not prosecuted by appeal within forty days, and the offender was subjected to two years' imprisonment, and a fine at the king's will. This lenity, however, was in a short time found very injurious, and by statute 18 Elizabeth, chap. 7, carnally knowing and abusing a child under the age of *ten* years, was made felony, without benefit of clergy. Sir Matthew Hale, says Blackstone, is indeed of opinion, that such actions committed on an infant under the age of *twelve* years, the age of female discretion by the common law, either with or without consent, amount to rape and felony, as well since as before the statute of Queen Elizabeth; but that law, he adds, has in general been held only to extend to infants under *ten*.†

by the verdict of a jury, so irritated and inflamed were the people, that the magistrates were insulted, and they threatened to pull down the house of the prisoner's counsel. After that, a civil suit was instituted for the injury done the girl, and a very enormous sum given in damages, and the defendant was ignominiously confined within the walls of a prison. Now it has come out, that the accusation was certainly false and malicious."—Report of the Trial, &c. p. 67.

* A man named Stewart, was tried at the Old Bailey in 1704, for ravishing two female children. The evidence being at variance as to the fact of penetration, the children were sent out of court to be examined, and the eldest was found to have the signs of virginity."—Smith, p. 397.

† Blackstone's Commentaries, vol. 4, p. 212.

By a recent act, however, (9 George IV. chap. 31.) passed in 1828, it is ordained, that any one unlawfully and carnally knowing and abusing any female under the age of ten years, shall be guilty of felony and shall suffer death. If the same be committed on a female above ten and under twelve, the offence shall be deemed a misdemeanor and liable to imprisonment.

In Scotland, it is held that consent cannot be given below the age of twelve years.*

The French code of 1810, ordains, that if the crime has been committed on a child under the age of *fifteen* years, the offender shall be condemned to hard labour for a limited time, (*travaux forces a temps*).† But it would seem that *consent* on the part of the minor female modifies the nature of the crime in France. At least such was the decision of the Court of Assizes at Strasbourg in 1827. An individual escaped from the punishment of rape for this reason.‡

In the state of New York, the statute of the 18th of Elizabeth, appears to have been copied. By an act passed Feb. 14, 1787, it was ordained, that if any person should unlawfully or carnally know a woman child under ten years of age, such unlawful or carnal knowledge should be adjudged a felony, and the criminal should suffer death.§ But by an act passed March 21, 1810, the above punishment was changed to that of imprisonment in the state prison, and continues so at the present time.|| In Massachusetts alone, so far as I am able to ascertain, the punishment is death.¶ In Virginia, Connecticut, New Hampshire, Maine, New Jersey, Illinois, Ohio, Michigan and Tennessee, the punishment is either imprisonment for life, or a term of years, or fine or imprisonment, or both. All these specify the period of *ten* years.** The law in Vermont varies from this. It directs that whenever any individual over the age of fifteen, shall abuse any female under *eleven*, with or without her will, he shall suffer fine and

* Alison, Principles, p. 213. † Code Penal, Art. 332. ‡ Briand, 2d Edit. p. 10.

† Jones and Varick's edition of the Laws of New York, vol. 2, p. 47.

|| Revised Statutes, vol. 2, p. 663.

¶ General Laws of Massachusetts, 1807, vol. 3, p. 340.

** Revised Laws of Virginia, 1803, vol. 1, p. 356; Session Laws of Connecticut, 1830, p. 254; Laws of New Hampshire, 1830, p. 137; Laws of Maine, 1829, p. 1190; Digest of the Laws of New Jersey, 1833, p. 223; Revised Laws of Illinois, 1833, p. 179; Laws of Ohio, 1831, p. 136; Laws of Michigan, 1820, p. 193; Digest of Laws of Tennessee, 1831, vol. 1, p. 245.

imprisonment.* In Indiana, the age of the female is extended to *twelve* years, and the punishment is imprisonment for a term of years.† In Missouri, a rape on a female under the age of *ten* years is punished by castration.‡ In Delaware, the law directs a fine, standing in the pillory for one hour, sixty lashes on the back well laid on, imprisonment for not more than two years, and afterwards, to be sold as a servant for a term not exceeding fourteen years.§

A few remarks are here necessary as to the credibility of witnesses in these cases. "If a rape," says Blackstone, "be committed on an infant under twelve years of age, she may still be a competent witness, if she hath sense and understanding to know the obligation of an oath, or even to be sensible of the wickedness of telling a deliberate lie. Nay, though she hath not, it is thought by Sir Matthew Hale that she ought to be heard without oath, to give the court information; and others have held, that what the child told her mother or other relatives, may be given in evidence, since the nature of the case admits frequently of no better proof.|| But it is now settled," he adds, (Brazier's case before the twelve judges, 19 George III.) "that no hearsay evidence can be given of the declaration of a child, who hath not a capacity to be sworn; nor can such child be examined in court without oath; and that there is no determinate age, at which the oath of the child ought either to be admitted or rejected.¶ Yet,"

* Laws of Vermont, 1825, p. 254.

† Revised Laws of Indiana, 1831, p. 136.

‡ Revised Laws of Missouri, 1825, vol. 1, p. 283.

§ Revised Laws of Delaware, 1829, p. 129.

|| Formerly it was the practice in the English courts to refuse the evidence of children. (See the King v. Travers, in 1 Strange, p. 700.) Lord Chief Baron Gilbert and Chief Baron Raymond, at two different trials, refused the evidence of the injured child, who was six years old, and the man was acquitted for the want of evidence.

¶ The case above mentioned was as follows: One Brazier was indicted at the assizes for York, for a rape on an infant seven years of age. The information of the infant was received in evidence against the prisoner; but as she had not attained the years of presumed discretion, and did not appear to possess sufficient understanding to be aware of the danger of perjury, she was not sworn. The prisoner was convicted; but the judgment was respited, on a doubt whether evidence, under any circumstances whatever, could be legally admitted in a criminal prosecution, except upon oath. Mr. Justice Gould accordingly reserved this point for the opinion of the twelve judges; and they unanimously agreed, "that no testimony can be received legally, except upon oath; and that an infant, though under the age of seven years, may be sworn in a criminal prosecution, provided such infant appears, on strict examination by the court, to possess sufficient knowledge of the nature and consequences of an oath; for there is no precise or fixed rule as to the time within which infants are excluded from giving evidence, but their admissibility depends upon the sense and reason they entertain of the danger and impiety of falsehood, which is to be collected from their answers to questions propounded to them by the court; but

he adds, "where the evidence of children is admitted, it is much to be wished, in order to render their testimony credible, that there should be some concurrent testimony of time, place and circumstances, in order to make out the fact; and that the conviction should not be grounded singly on the unsupported accusation of an infant under years of discretion."*

2. I shall now proceed to give an enumeration of the laws of various countries against the crime of rape, arranged, as much as possible, in chronological order. "If a man," says the Jewish law, "find a betrothed damsel in the field, and the man force her and lie with her, then the man only that lay with her shall die: But unto the damsel thou shalt do nothing; for he found her in the field, and the betrothed damsel cried, and there was none to save her."† In case the female was not betrothed, then a fine of fifty shekels was to be paid to her father, and she was to be the wife of the ravisher, without permitting him the power of divorce.

Among the Athenians, rape was punished with death; and by the Roman or civil law, with death and confiscation of goods.‡ The latter, however, ordained, "*Rapta raptoris, aut mortem, aut indotatas nuptias optet;*" and upon this, says Dr. Percival, there arose what was thought a doubtful case. "*Una nocta quidam duas rapuit, altera mortem optat, altera nuptias.*"§ The Roman law also would not receive the complaint of a prostitute.||

Among the Lombards, after their settlement in Italy, "Crimes against chastity were visited sometimes too mildly; at others, too severely. He who forced his own female slave, provided

if they are found incompetent, their testimony cannot be received." (East's Crown Law, vol. 1, p. 444.)

* Blackstone, vol. 4, p. 214. In South-Carolina, a case occurred in 1813, where the material witness was the female injured, of seven years of age. The prisoner was convicted; and on appeal, the judgment was held good. The court remarked, that this testimony was sufficient, if corroborated by circumstances; and in this instance, both the prisoner and witness had the same disease. (State v. Le Blanc. 2 South-Carolina Constitutional Reports, p. 354.)

† Deuteronomy xxii. 25. Michaelis, however, contends, that for rape, *as rape*, no punishment is appointed by the Mosaic law; and he explains the above passage by considering it only as rape committed on a bride. In either case, whether in the city (verse 23) or in the field, the perpetrator was to be punished—but not if the female was not betrothed. Our author proposes several reasons for this omission, and amongst others, the debasement which polygamy produces in the female sex, and the law that whoever debauched a damsel should marry her. This last he deems a more effectual preventive of rape, than capital punishment. Michaelis's Commentaries, vol. 4, p. 169 to 174.)

‡ Gibbon, vol. 2, p. 252. Law of Constantine.

§ Medical Ethics, note 17, p. 231.

|| Foderé, vol. 4, p. 325.

she were single, escaped without punishment; but if she were married, both she and her husband were enfranchised. If he forced the bondwoman of another, he was subject to the penalty of twelve, twenty or forty sols, according to her comparative state. The ravisher of a free woman was mulcted at a much heavier sum—at nine hundred sols.”*

It would appear that there was no punishment provided for this crime, in the codes of several of the original Germanic tribes. At least, “the code of the Bavarians had none, except such as the ecclesiastical law directed, for the freeman who violated a female unmarried slave. The slave, however, who violated a free maiden, was surrendered to her parents, to do with him what they pleased, even to put him to death.”†

Charlemagne punished with death, whoever violated the daughter of his master.‡ The Burgundian laws provided that if the young woman carried off, returned to her parents actually corrupted, the offender should pay six times her price or legal valuation, and also a mulct of twelve shillings. If he had not wherewithal to pay these sums, he should be given up to her parents or near relatives, to take their revenge on him in what way they pleased.

By the Welsh laws of Prince Hoel Dha, if two women were walking together without other company, and violence was offered to either or both of them, it was not punishable as a rape; but if they have a third person with them, they might claim their full legal redress. If the perpetrator of a rape, being accused, confessed the fact, besides full satisfaction to the woman, he was to answer for the crime to his sovereign, by the present of a silver stand as high as the king’s mouth, and as thick as his middle finger, with a gold cup upon it, so large as to contain what he could take off at one draught, and as thick as the nail of a country fellow who had worked at the plough seven years. If the

* Europe during the Middle Ages, in Lardner’s Cyclopaedia, vol. 1, p. 16.

† Europe during the Middle Ages, in Lardner’s Cyclopaedia, vol. 2, p. 137.

‡ “Si quis filiam domini sui rapuerit, morte moriatur.” (See *Memoirs of Literature*, vol. 6, p. 103. “A Notice of the Monumenta Paderbornensia, to which is added the Capitulary of Charlemagne, from a very ancient Palatine manuscript in the Vatican, published in 1713.”) Hallam also mentions, that under the feudal system, it was considered a breach of faith in the vassal, to violate the sanctity of his master’s roof. In the Establishments of St. Louis, chapter 51, 52, it is said, that a lord seducing his vassal’s daughter, entrusted to his custody, lost his seignory; and a vassal guilty of the same crime towards his family of the suzerain, forfeited his land. (Hallam’s *Middle Ages*, vol. 1, p. 187, American edition.)

offender was not able to make such a present, *virilia membra amittat*.

By the law of Æthelbert, the first Christian king of Kent, it was enacted, that if any person takes a young woman by force, he shall pay her parent or guardian fifty shillings, and shall make a further compensation for her ransom. If she were espoused, he shall compensate the husband by an additional payment of twenty shillings, but if she were with child, the augmented fine shall be five and thirty shillings, and fifteen more to the king.

There is also an ordinance of Alfred in existence, for the punishment of rapes committed on country wenches who were servants; an offence (says Dr. Percival) which may be supposed to have been prevalent at that time.* Rape, however, by the Saxon laws, particularly those of king Athelstan, was punished with death; which was also agreeable to the old Gothic or Scandinavian constitutions. Besides this, the horse, grayhound and hawk of the offender were subjected to great corporal infamy. Instead of this, a new punishment was inflicted by William the Conqueror, who probably brought the custom from Normandy, viz. castration, and loss of eyes. During the period that this was in force, the woman who was the sufferer might (by consent of the judge and her parents) redeem the criminal from all the penalties, if, before judgment, she demanded him for her husband, and he also was willing to agree to this exchange. This law of William continued in force in the reign of Henry the Third; but in order to prevent malicious accusations, it was then law, (and, it seems, still continues to be so in appeals of rape,) says Blackstone, that the woman should immediately after, "*dum recens fuerit maleficium*," go to the next town, and there make discovery to some credible persons of the injury she has suffered, and afterwards should acquaint the high constable of the hundred, the coroners and the sheriff, of the outrage. This seems to correspond in some degree with the ancient laws of Scotland and Arragon, which require that complaint must be made within twenty-four hours; though afterwards, by Statute Westminster, the time of limitation was extended to forty days. This statute,

* It is as follows: "Si quis coloni mancipium ad stuprum comminetur, 5 sol. Colono emendet et 60 sol; mulctæ loco. Si servus servam ad stuprum coegerit, compenset hoc virgâ suâ virili. Si quis puellam teneræ ætatis ad illicitum concubitum comminetur, eodem modo puniatur quo ille qui adultæ servæ hoc facerit." (Percival, p. 228.)

passed in the 3d of Edward I. repealed the law of the Conqueror, and greatly mitigated the punishment. The offence of ravishing a woman against her will, was reduced to a trespass, if not prosecuted by appeal in forty days; and it subjected the offender to only two years' imprisonment, and a fine at the king's will. But this lenity was found productive of the most terrible consequences; and in ten years after, 13th Edward I. it was found necessary to make the offence of forcible rape, felony by statute.*

The constitution of Charles the Fifth enacted the punishment of death for rape; and the edict of Francis the First, preserved by Coquille, together with the ordinances of Orleans and Blois, forbade the asking of pardon for this crime. Henry the Second of France, by an ordinance of 1557, condemned those who had forced a woman or a girl, to be hung. Such was also the edict of Louis XV. in 1730; and such are the laws of various states in Italy. The ancient parliaments of France, during the sixteenth and seventeenth centuries, enforced the law with great severity on those accused of the crime.†

The above gleanings will elucidate, in some degree, the laws of former times concerning this crime. I now proceed to mention those which are, or lately have been, in force. The following maxims, says Foderé, (which he quotes from Boerius,) have been adopted for thirty years in Neapolitan jurisprudence, viz. that in accusations for rape, there be full proof of the following facts: 1. That there has been a constant and equal resistance on the part of the person violated. 2. That there is an evident inequality of strength between the parties. 3. That she has raised cries; and 4. That there be some marks of violence present. The French code of 1791, ordained that a simple rape should be punished with six years' confinement in irons; but if the rape be

* Blackstone, vol. 4, pp. 210, 211. Percival, p. 100; and note 17, p. 228. Chitty's Criminal Law, vol. 2, p. 813.

† Foderé, vol. 4, p. 326. "Among the familiar customs of the Isle of Man, are the following: If a man ravish a wife, he must die—if a maid, the decompsters (the judges) deliver to her a rope, a sword, and a ring; and she is then to have her choice to hang, behead, or marry him." See Review of a Tour through the Isle of Man, by David Robertson, Esquire, London, 1793, in the British Critic, vol. 3, p. 408.

In China, rape is punished with death. (Edinburgh Review, vol. 16, p. 498. Review of the Penal Code of China, translated by Sir George Staunton.)

In modern Egypt, under the present Pacha, rape by a bachelor is punished with one hundred blows, and banishment from six months to a year; but if by a married man, he is stoned to death. (Annales D'Hygiène, vol. 10, p. 204.)

committed on a child under fourteen years, or if the criminal had effected the crime by violence, or by the aid of accomplices, the punishment should be twelve years' confinement in irons. The law of 2d Prarial L'an 4, (1796) prescribed the same punishment for an attempt, if accompanied by violence. All these ordinances were, however, annulled by the Napoleon code, which prescribes imprisonment for the crime, if consummated or attempted with violence. If, however, the criminal has any authority over the person injured, such as a guardian or a teacher, if he be a servant, public functionary, or clergyman, and finally, if the individual, whoever he be, is aided by one or more persons, the punishment shall be imprisonment for life.*

In Scotland, according to Baron Hume, the following facts are necessary to be proved on a charge of rape. 1. Penetration, but there is no distinct reference made to emission. 2. Actual force in the consummation, but it is held to be forcible knowledge if the female discontinue her resistance out of fear of death, or be rendered incapable of it, by the giving of narcotic drugs, or be under the age of puberty. So also if she faint during the struggle from terror or fatigue, or is incapable of opposition from natural infirmity. Thus James Mackie was condemned in 1650, for a rape on a cripple, a lame lass sixteen years old, laying bedridden in her father's house alone. No limitation as to the time of making the complaint exists at present, although a long delay might doubtless prejudice a jury against the prosecutor.†

The ravisher is exempted from the pains of death, only in case of the woman's subsequent consent, or her declaration, that she went off with him of her own free will; and even then he is to suffer an arbitrary punishment, either by imprisonment, confiscation of goods, or a pecuniary fine.

The law at present in force in England, is the statute 18th Elizabeth, chap. 7, in which rape is made felony, without benefit of clergy. It is a necessary ingredient in the English law, that the crime should be against the woman's will, and in this, it differs from the Roman, which prescribed the same punishment, whether the female consented or not. The civil law also, (as we have already stated) does not seem to suppose a prostitute capable of

* Foderé, vol. 4, p. 328-329; Code Penal, art. 331-333.

† Hume's Commentaries on the Laws of Scotland, vol. 2, p. 3, 5, 6, 14; Brewster's Edinburgh Encyclopedia, vol. 11, p. 823; Law of Scotland.

any injuries of this kind, whilst the English law holds it felony to force even a concubine or harlot, because the woman may have forsaken that course of life. At present, also, no time of limitation for making complaint is fixed, but the jury will rarely give credit to a stale accusation. In addition to these, we may add, that the common law considers a male infant, under the age of fourteen, as incapable of committing a rape, and therefore cannot be found guilty of it. For though, (says Blackstone) in some felonies, *malitia supplet ætatem*, yet as to this particular species, the law supposes an imbecility of body as well as mind.*

In the state of New York, death was formerly the punishment for committing a rape on a married woman or a maid. (Act passed Feb. 14, 1787.)† And it was also ordained at the same time, that if a woman had been ravished, and afterwards consented to her ravisher, her husband, father, or next of kin, might sue by appeal against such offender. These laws however, have been repealed, the punishment altered, and appeals of felony abolished. The acts now in force prescribe the punishment of imprisonment for ten years in the state prison, on the offender and his accomplices, if he have any, for ravishing by force any woman child of the age of ten years or upwards, or any other woman. An assault with an intent to commit a rape, may be punished by fine and imprisonment or both.

The following enactment has also been recently added. "Every person who shall have carnal knowledge of any woman above the age of ten years, without her consent, by administering to her any substance or liquid, which shall produce such stupor, or such imbecility of mind or weakness of body, as to prevent effectual resistance, shall, upon conviction, be pu-

* Blackstone 4, chap. 15, sect. 3. A case bearing on the above point, was decided some years since, in Massachusetts. In 1823, a boy, under the age of fourteen, was convicted of an *assault with intent to commit a rape*. On a motion in arrest of judgment, the law as above quoted was urged, showing that a person is deemed incapable, and consequently that it would be absurd to punish him for *attempting*, what the law presumes him incapable of *doing*. But the court decided that the judgment must stand. "The law which regards infants under fourteen as incapable of committing rape, was established in *favorem vitæ*, and ought not to be applied by analogy to an inferior offence, the commission of which is not punished with death. An intention to do an act does not necessarily imply an ability to do it, and females might be in as much danger from precocious boys as from men, if such boys are to escape with impunity from felonious assaults, as well as from the felony itself." Commonwealth v. Green, 3 Pickering's Massachusetts Reports, p. 380.

† Jones and Varick's edition of the Laws, vol. 2, p. 57.

nished by imprisonment in a state prison not exceeding five years.”*

In the states of Massachusetts, Rhode-Island, Delaware and South Carolina, the punishment prescribed, is death.† While in Connecticut, Georgia, Illinois, Indiana, Ohio, Maine, New Hampshire, New Jersey, Vermont, Pennsylvania, Virginia and Michigan, imprisonment for a term of years, or for life, is directed. In some few cases, fine or imprisonment, or both.‡ In Louisiana, imprisonment and hard labour for life, is the punishment.§ In the state of Missouri, and also in the territory of Arkansas, the punishment prescribed is castration.||

The attempt to commit this crime, or its actual completion, by a negro or mulatto, is made a subject of special legislation in several states. Thus in Tennessee, Alabama and Louisiana, even the attempt on a white woman, is made a capital offence.¶ In Virginia and Missouri, the same is punished by castration.**

In a few of the states, some specific provisions are made as to the proof of rape. In Illinois, it is not necessary to prove emission, in order to constitute it; and in Indiana and Tennessee, penetration is held sufficient.

The reasons on which this change is founded, may deserve some consideration at the conclusion of the present section.

Rape is the *carnal knowledge* of a female, forcibly and against her will. It has been a subject of some legal discussion, as to what constitutes this carnal knowledge. Some judges have supposed that penetration alone was sufficient, while others have contended that penetration and emission are both necessary. All seem agreed that the latter without the former will not suffice.

* Revised Statutes, vol. 2, p. 663-666.

† Laws of Massachusetts, 1807, vol. 3, p. 340. Revised Laws of Delaware, 1829, p. 128. Public Laws of South-Carolina, edited by Judge Grimke, p. 30. Fourth Report of American Prison Discipline Society.

‡ In addition to the references on a former page, Prince's Digest of Laws of Georgia, 1817, p. 349. Laws of Pennsylvania, 1803, vol. 5, p. 2. Revised Laws of Virginia, 1803, vol. 1, p. 356. In New Jersey, a second offence is punished with death. Laws 1828.

§ Digeste Général des Actes de la Legislature de la Louisiana, 1828, vol. 1, p. 441.

|| Revised Laws of Missouri, p. 125, vol. 1, p. 31. Nuttal's Journey to the Arkansas, p. 224.

¶ Laws of Tennessee, 1833, p. 94. Laws of Alabama, 1830. Code Noir of the Louisiana Digest, vol. 1, p. 234, 297. Virginia punishes actual rape on a white woman by a slave, with death.

** Mr. Jefferson, who was appointed a reviser of the Laws of Virginia, in 1778, proposed castration as the punishment in all cases of rape. (Works, vol. 1, p. 126.) This was not however adopted,

The following abstract, taken from Chitty's Treatise on the Criminal Law, will give an idea of the fluctuating state of jurisprudence on this subject. "Lord Coke, in his reports, supposes both circumstances must concur, 12 Cok. 37, though he does not express himself so clearly in his institutes. Hawkins, without citing any authority, or hinting a doubt, declares the same opinion. Hale, however, differs from both, and considers the case in Coke's Reports as mistaken. In more modern times, prisoners have been repeatedly acquitted, in consequence of the want of proof of emission. In one instance, (*Rex v. Russen*, 14 Petersdorff, 116,) on the other hand, the prisoner was found guilty under the direction of Justice Bathurst, who did not consider this fact as necessary to the consummation of the guilt. But in Hill's case, which was argued in 1781, a large majority of the judges decided that both circumstances were necessary, though Buller, Loughborough and Heath maintained a contrary opinion. This then," he adds, "seems to be the stronger opinion, and at the present day, if no emission took place, it would be more safe to indict for an attempt to commit, by which means a severe punishment might be inflicted."*

Although the definition of the crime seems thus to be settled,

* Chitty's Criminal Law, vol. 2, p. 810. This abstract is for the most part taken from East's Pleas of the Crown, (vol. 1, p. 437 to 440.) In this last, a number of cases are given, which very strikingly prove the diversity of opinion that has existed amongst the English judges. The leading particulars in the case of Hill, cited above, are also stated; and the great majority of the judges that deemed both necessary, to constitute the crime, seem to have settled the law in that country. A decision conformable to it was made by Baron Richards at the Northumberland assizes in 1815; and as the case is interesting, I shall detail its leading particulars. The prosecutrix was a married woman, apparently between thirty and forty years of age. The defendants were two brothers, by one of whom the act was alleged to have been perpetrated, while the other held the husband forcibly down at not more than two yards distance from the spot where his wife was said to have been violated. The woman swore positively to the penetration, but could not swear to the emission; and she assigned as a cause, the agitation and syncope which supervened during the struggle. She perfectly comprehended the import of the question put to her; and declared explicitly, that she had, on every previous coition with her husband, been sensible of the act of emission. Nor could she say that she was aware of any unusual humidity of the parts immediately after the commission of the crime. This she ascribed to having tumbled or waded through some water at the bottom of the dean where the assault took place. On both these points, Baron Richards laid great stress; and told the jury, that the fact of emission must be sworn to or proved, in order to constitute the crime of rape, according to the law of England. The evidence of the husband also went to prove, that the ravisher remained long enough on the body of the female to complete his purpose. The evidence for the prosecution, however, failed in credibility; as the prisoner's counsel, besides the above particulars, showed satisfactorily, that the man and his wife were at the time in a state of intoxication, sufficient to destroy the validity of what they had sworn to. The prisoners were accordingly found not guilty. (*Edinburgh Medical and Surgical Journal*, vol. 12, p. 207.)

yet if we proceed to notice the mode in which the emission is to be proved, we shall find some discordance. East observes, that penetration is *prima facie* evidence of it, unless the contrary appears probable from the circumstances; and adds, that Hawkins is express to that purpose. "So where, upon an indictment for an assault with an intent to ravish the prosecutrix, she swore that the defendant had had his will with her, and had remained on her body as long as he pleased, though she could not speak as to emission, Judge Buller said that this was a sufficient evidence to be left to a jury of an actual rape; and therefore ordered the defendant to be acquitted under the present charge. He said, that he recollected a case where a man had been indicted for a rape, and the woman had sworn that she did not perceive any thing come from him; but she had had many children, and was never in her life, sensible of emission from a man: and that was ruled not to invalidate the evidence which she gave of a rape having been committed on her."* Chitty observes, "It is certain that no direct evidence need be given to the emission; but that will be presumed on proof of penetration, until rebutted by the prisoner. And it will suffice to prove the least degree of penetration, so that it is not necessary that the marks of virginity should be taken from the sufferer."† So also Baron Richards, in the case cited below, although he deemed emission essential, and the woman was not sensible of it, yet told the jury, that it was for them to deliberate whether, on a careful examination of all the other collateral circumstances of the case, they had reason to be satisfied that this part of the crime, as well as every other, had been actually consummated.‡

If there be any truth in the views already intimated concerning the possibility of committing this crime, and the cases in which it may be completed, certainly the necessity of establishing the fact of emission must prove an insuperable barrier to any conviction. We may divide females, with reference to this subject, into two classes—the young, unmarried persons; and the mar-

* East, 2, p. 440. This case was tried at the Winchester assizes, 1787.

† Chitty, 2, p. 812. I have already quoted the case (p. 138,) on which the latter part of this dictum is founded. This may probably be correct in children under ten years of age; but in all others, it will be readily observed, that if it be allowed, all possibility of the female's proving the emission is in a great measure done away. Surely such instances are rather to be considered as *attempts to commit the crime*, than the *consummation of it*.

‡ Edinburgh Medical and Surgical Journal, vol. 12, p. 208.

ried, or those accustomed to sexual intercourse. As to the first, it may be considered very improbable that they could be conscious of this, while labouring under the influence of terror, severe pain, faintness, or insensibility. And to this class also belong those of a very tender age, who are totally ignorant of the nature of the crime, and of what is necessary to complete it.

It is, however, urged, that there is great propriety in requiring this testimony from married females; and that if they are not sensible of that "which constitutes the very essence and climax of feeling," their declarations do not deserve much credit as to the other parts, in which a less degree of poignancy of sensation is requisite.* I confess, that language of this kind appears to me misapplied. If proper resistance be made, where the contest is solely between two individuals of strength in any degree proportionate, the crime can scarcely be completed without violent personal injury to the female. The exhaustion that must be present, superadded to mental agitation, leaves us some reason to doubt whether this enjoyment can be realized. And it also deserves consideration, that if the resistance has been *complete throughout*, such pain may ensue from the repeated attempts to effect the crime, as to dull all sensation on this point. I forbear pressing the case mentioned by Judge Buller, although it is probable that other females, like the one mentioned by him, may not be sensible of it.†

The diversity of opinion that I have noticed, has extended to our own country. In a case tried some years since at the Albany Circuit, in this state, by the late Justice Platt, he declared the law to be as laid down by the Judges in Hill's case. But in Pennsylvania emission is not deemed essential. In a case tried in 1793, when it was urged that both penetration and emission should be proved, the Judge said—"We are inclined to the opinion, that the crime is sufficiently proved, when penetration is proved. It is not to be expected that the woman especially agi-

* Edinburgh Medical and Surgical Journal, vol. 12, p. 209.

† "Considering the nature of the crime, that it is a brutal and violent attack upon the honour and chastity of the weaker sex, it seems more natural and consonant to the sentiments of laudable indignation which induced our ancient lawgivers to rank this offence among felonies, if all further inquiry were unnecessary, after satisfactory proof of the violence having been perpetrated by actual penetration of the unhappy sufferer's body. *Under what principle, and for what rational purpose, any further investigation came to be supposed necessary, the books which record the dicta to that effect do not furnish a trace.* (East, 2, p. 436, 437.)

tated by such outrage, should be able to give explicit proof of this circumstance.”* So also in South Carolina, in 1813, Judge Nott said he had strong doubts whether it was necessary to prove emission, and the court refused to disturb the verdict.†

The difficulties attending such conflicting decisions in England, probably led to the enactment of a recent law there, by which it is ordained, that on trials for the crime of rape, and of carnally abusing girls under the respective ages of ten or twelve years of age, it is not necessary to prove actual emission in order to constitute carnal knowledge, but this shall be deemed proved, upon testimony of penetration only.‡ This law was passed in 1828, 9th George IV, and it is often called Lord Lansdowne’s act, as that nobleman introduced it.

Scarcely, however, had this become the statute law of the realm, when difficulties occurred in its construction. In August, 1831, on a trial before Justice Taunton, the female proved penetration, and also that she felt warmly in her private parts, but could not prove emission. The counsel for the prosecution submitted that this was a case exactly coming within the late law. The judge, however, said that all that constitutes carnal knowledge should have happened. The jury must be satisfied from circumstances that emission took place, and although it was not necessary specifically to prove it, yet the circumstances should be such as to infer it. The prisoner was accordingly acquitted.§

I must be permitted to agree with the reporter of the case, in saying that this decision makes the statute of George IV, inoperative. Even before its enactment, it was unnecessary to give *direct* evidence of emission. It was enough if the circumstances were such as to satisfy that it had taken place. But how can Judge Taunton’s opinion be reconciled with the statute, which says, that it is *sufficient to prove penetration only*?

His decision, however, appears to have been subsequently

* Commonwealth v. Sullivan, Addison’s Pennsylvania Reports, p. 143.

† State v. Le Blanc, 2 South Carolina Constitutional Reports, 351. I have already mentioned that in Illinois, the statute requiring proof of emission was formally repealed. Acts passed in 1819, p. 219.

‡ Professor Amos queries whether, under this law, an *eunuch* may not be found guilty of a rape; and again he suggests the possible case, where no penetration is proved, but emission only. London Medical Gazette, vol. 8, p. 33—96. In this last, however, the jury would doubtless infer the one from the other, particularly as Lord Hale has pronounced emission an *evidence* of penetration.

§ 2 Moody, and Malkin p. 122; Rex v. Russel.

overruled. In *Rex v. Cox*, at the Worcester assizes, in 1832, before Justice Littledale, the jury found that there had been penetration, but no emission from the prisoner, and the judge after passing sentence on the prisoner, reserved the case for the consideration of the fifteen judges. They held the conviction to be right.*

In Scotland, after much diversity of opinion, the point now considered was settled in 1821, by Lord Gillies, who "laid it down, with the concurrence of the court, that rape may be perpetrated by complete penetration without emission, and that when the injured party is below the age of puberty, it is enough if her body has been entered, though not to the degree which takes place with a full grown woman.†

By a recent enactment in the state of New York, a similar provision has been adopted in the following words: "Proof of actual penetration into the body, shall be sufficient to sustain an indictment for rape, or for the crime against nature."‡

IV. *Of some Medico-Legal questions connected with this subject.*

Three questions relating to the subject before us, have at various times been discussed, and they all deserve a brief notice.

1. *Whether the presence of the venereal disease in the female violated, is a proof in favour or against her accusation?* If on examination, the marks of this disease be found recent, it will be proper to consider them as corroborating circumstances. It is necessary, however, to remark, that the symptoms of venereal infection do not commonly make their appearance until three days after receiving it, while the examination should be made within that time. Should the appearances indicate any thing like a disease of long standing, they must of course tend to weaken the complaint of the female. The following are cases which will illustrate these observations. On the 11th of Dec. 1811, Foderé was directed by the imperial attorney of the court of Trevoux, to visit a female aged from eleven to twelve years, who accused a man

* 5 Carrington and Payne, p. 297; American Jurist, vol. 11, p. 459; Chitty's Med. Jurisp. part 1, p. 379.

† Alison's Principles of the Criminal Law of Scotland, p. 210.

‡ Revised Statutes, vol. 2, p. 735.

aged fifty, and of large stature, of having committed a rape on her. The crime she stated was consummated on the 26th of Nov. preceding. On examination, our author found that in this person, the menses had not yet appeared, the nymphæ were inflamed, and the parts surrounding the meatus urinarius discharged an acrid gonorrhœal fluid, the hymen was ruptured, and the entrance of the vagina enlarged, but the fourchette was not ruptured nor were there any signs of great violence, or such as might be expected from the disproportion between the individuals. Foderé reported that the venereal disease in this child was a proof of connexion, but he did not consider it so of rape. Her conduct, he adds, was destitute of all modesty. The accusation was, however, persisted in; but on the trial, it was proved that the parents had placed her with a woman who was a prostitute, and also that the child had never complained of violence, until after she discovered symptoms of the venereal. The prisoner was acquitted.*

A somewhat opposite, but very interesting case, occurred a few years since at Rome. A young man, of excellent family and high character, was accused of a rape, by a girl not yet arrived at the age of puberty. He was arrested, and a medical examination of the female was had by three physicians and two midwives. They reported that they found "the sexual organs altered and tumid, and at the entrance of the vagina, the hymen was entirely wanting; the whole of the vagina was irritated, inflamed, and of a deep red colour, but particularly so at the point of the frænulum." The vagina was dilated, so as to admit a finger with perfect facility; and finally, they observed a copious discharge of purulent and sanguinolent matters. The medical witnesses gave it, as their opinion, that the complainant had been recently deflowered, and that the above mentioned flux, by its quantity and appearance, might be derived from a mechanical injury, or actually from a communicated gonorrhœa.

The girl swore that the discharge commenced *immediately* after the rape. It did not yield to the ordinary antiphlogistic treatment, and two subsequent examinations by the same physicians

* Foderé, vol. 4, p. 365—366.

induced them to lean still more strongly to the idea of its being syphilitic.

The accused (named Crespi) was condemned. His case was reviewed by Metaxa, professor of anatomy, at the Sapienza college, and the argument resolved itself into two points,—first, to endeavour to set aside the charge of rape; and second, to demonstrate the pre-existence of leucorrhœa in the female.

On the first, the usual objections were urged as to the uncertainty of the proof to be derived from the absence of the signs of virginity, and it was argued that a rape thus committed on a female under the age of puberty, should have left more marked and severe traces.

His observations on the second were more conclusive. Condemning the insufficiency of the examinations, he asserts that the actual nature of the affection might have been ascertained with certainty. Leucorrhœa is constantly derived from the uterus, while gonorrhœa does not extend farther than the external organs. If, therefore, these last be washed carefully, and inspected, no mistake could occur. Again, he urged that gonorrhœa has its regular periods of high inflammation and decline; whereas leucorrhœa is often chronic, and increases and diminishes at indeterminate times. The occurrence of the discharge *immediately* after the alleged violence, is also against the idea of its syphilitic origin.

Some criticisms on the depositions of the examining physicians, conclude this work of Prof. Metaxa; such as their speaking of most acute inflammation, and yet no pain appearing to have been present; the vagina was much inflamed, and yet it could be examined with perfect facility. No hæmorrhage, nor inability to move, appears to have followed the crime: Further, no mention was made of the presence of the *carunculæ myrtiformes*, which should have been seen from the laceration of the hymen.

Our author also brought testimony to prove that the accuser was of a scrofulous habit, and at a very early age had suffered from leucorrhœa.

On these grounds Prof. Metaxa, and twenty-eight professors and physicians at Rome, who approved and signed his publication, gave an opinion in favour of the convicted criminal. It led to a reversal of his sentence.

It is curious to remark, and the observation is a shrewd one of the reviewer whom I quote below, that the very argument of Prof. Metaxa, while it certainly goes to prove that the physicians were wrong in supposing gonorrhœa to be present, strengthens greatly the physical proofs of rape. We should not expect marks of severe injury or violent inflammation in parts previously relaxed by leucorrhœa, but appearances corresponding to what was observed. Such indeed was probably the truth of the case, and the Illustrissimo Signor Crespi escaped from a sufficient want of discrimination on a collateral point of testimony.*

I add the following, because it occurred in New York:—H. Flynn was indicted in 1822, for an assault with intent to commit a rape on a child aged ten years. She said that he had taken her into the cellar, and kept her there for half an hour between one and two, P. M. At night, the mother found her linen discoloured and stained with blood; and in a short time, symptoms of what Dr. Brown, one of the witnesses, considered gonorrhœa, came on. The prisoner was put into Bridewell; and Dr. Walker, the attending physician, proposed an examination, which he resisted until forced thereto by the police. His linen was found discoloured, and conclusive marks of disease appeared. On the trial, these facts were proved. Dr. Mott, for the prisoner, stated, that he had been called upon two days after the examination made by Dr. Walker, and found no marks of disease. He had also visited the child, and was uncertain whether it was the venereal or not—he deemed it impossible to tell at that age, and under the circumstances of the case. Dr. Walker was again called, and urged in explanation, that by using proper remedies, the most skilful physician might be deceived by the patient, and the disease be so far removed as not to be visible in even much less time than two days. This opinion was concurred in by Dr. Mott. The prisoner was found guilty.†

2. *Can a female be violated during sleep, without her knowledge?* If the sleep has been caused by powerful narcotics, by intoxication, or if syncope or excessive fatigue be present, it is

* I have obtained all my knowledge of this case from a review of "*Dissertazione medico-forense riguardante la causa della Ilmo. Sig. Achille Crespi, accusato di stupro immaturo. Autore Luigi Metaxa, publica professore, &c. Roma, 1824*"—in *Chapman's Journal*, vol. 9, p. 427.

† *Wheeler's Criminal Cases*, vol. 1, p. 74.

possible that this may occur; and it ought then to be considered, to all intents, a rape. In such cases, the quantity of stupifying drugs administered may be so great, as to render her unable, even if awakened by the violence, to withdraw from it. The proof of the crime is to be obtained from the injury sustained; from the symptoms attendant on the exhibition of narcotics, (if they have been given,) and which will be noticed under the head of Vegetable Poisons; and finally, by (what may certainly happen) pregnancy occurring, and its term corresponding to the above era. As to natural sleep, I totally disbelieve its possibility with a pure person. The medical faculty of Leipsic, however, in 1669, decided that it might be accomplished. I prefer, however, the opinion of the juridical faculty of Jena, who in a similar case, only allowed the exceptions already stated.* As to females accustomed to sexual intercourse, it has been supposed practicable; but if we do agree to that opinion, the circumstances certainly should be very corroborative. Some degree of scepticism may. I think, be permitted concerning it.†

3. *Does pregnancy ever follow rape?* On this question a great diversity of opinion has existed. It was formerly supposed that a certain degree of enjoyment was necessary in order to cause conception, and accordingly the presence of pregnancy was deemed to exclude the idea of a rape. Late writers, however, urge that the functions of the uterine system are, in a great degree, independent of the will; and that there may be *physical constraint* on those organs, sufficient to induce the required state, although the will itself is not consenting. We do not know, nor shall probably ever know, what is necessary to cause conception; but if we reason from analogy, we shall certainly find cases where females have conceived while under the influence of narcotics, of intoxication, and even of asphyxia, and consequently without knowing or partaking of the enjoyment that is insisted on. I should, therefore, consider that pregnancy was not incompatible with the idea of rape, under the limitations already laid down.

* The Faculty of Leipsic decided, "dormientem in sella virginem insciam deflorari posse." (Valentini Novellæ, p. 30, 31.) In his Introduction, (p. 2,) our author sneers at the ridiculous decision in this case: "Non omnes dormiunt, qui clausos et conniventes habent oculos."

† See on this question, Fodéré, vol. 4, p. 367; Capuron, p. 52; Smith, p. 401; and Brendelius, p. 96 and 98-9. This last doubts its possibility, even in the exceptions stated in the text.

Several writers on this subject are, however, of a different opinion, and particularly Dr. Bartley, who goes so far as to recommend that pregnancy shall be considered a proof of acquiescence; and that in order to ascertain this, the punishment of the criminal be delayed till the requisite time.*

The law is in accordance with the opinion advanced above. Foderé mentions that there is a decree of the parliament of Toulouse, which decides in the affirmative and that on the opinion of physicians who reported, "*Posse quidem voluntatem cogi, sed non naturam, quæ semel irritata pensi voluntate fervescit, rationis, et voluntatis sensus amittens.*"† The English law anciently appears to have considered pregnancy as destroying the validity of the accusation. Dalton quotes Stamford, Britton and Finch, in favour of this opinion; but later writers, and in particular Hawkins and Hale, question its correctness, and deny its being law.‡ "It was formerly supposed," says East, "that if a woman conceived, it was no rape, because that showed her consent; but it is now admitted on all hands, that such an opinion has no sort of foundation either in reason or law."§

A few words are necessary on the *crime against nature*, and they may be properly introduced here.|| It may be required to

* Bartley, p. 43. The scope of his argument is, that the depressing passions, such as fear, terror, &c. will prevent the necessary orgasm from occurring. Farr intimates a similar opinion, (p. 43;) and so does Meierius, the editor of Brendel, (Note, p. 99.) Those who entertain the belief maintained in the text, are Capuron, p. 57; Foderé, vol. 4, p. 369; Metzger, p. 257, 486.

"It is not perhaps altogether impossible," says Dr. Good, "that impregnation should take place in the case of a rape, or where there is a great repugnancy on the part of the female; for there may be so high a tone of constitutional orgasm as to be beyond the control of the individual who is thus forced, and not to be repressed even by a virtuous recoil, or a sense of horror at the time." (Good's Study of Medicine, vol. 4, p. 100.) † Foderé, vol. 4, p. 360. ‡ Burn's Justice, art. *Rape*.

§ East's Crown Law, vol. 1, p. 445.

In connexion with this, it has been inquired whether pregnancy may follow defloration? I apprehend that this is to be answered in the affirmative, although the instances are comparatively rare. It is quite common, in cases of seduction, to swear that there has been only a single coitus; and although this may be doubted in some, yet in others there is hardly just ground to disbelieve a solemn affirmation. It also has occasionally, I presume, occurred to most physicians, on comparing the term of gestation with the period of marriage, to render it probable that the pregnancy must have happened at the earliest possible term.

"Ce qui rend un premier coit infructueux, (says Metzger, p. 486,) c'est, à mon avis, la précipitation de l'homme, bien plutôt que la douleur qui suit la défloration. Knobel est également de cet avis."

|| The following extract is curious, and for want of a better place, I subjoin it here: "De tous les crimes contre les personnes, l'attentat à la pudeur est celui pour lequel l'influence des saisons est le plus évidente. Sur 100 crimes de cet espèce, on en compté en été, 36; au printemps, 25; en automne, 21; et en hiver, 18 seulement." (Guerry. Essai sur la Statistique Morale de la France. Paris, 1833. Page 29.)

examine the individual on whom it has been committed. If without consent, inflammation, excoriation, heat and contusion will probably be present. The effects of a frequent repetition of the crime, are a dilatation of the sphincters, ulcerations on the parts, or a livid appearance, and thickening. It has been suggested, that secondary symptoms of lues might be mistaken for these; but I am hardly of this opinion. No man, however, ought to be condemned on medical proofs solely: The physician should only deliver his opinion in favour or against an accusation already preferred.*

The punishment of this crime has always been signal. Death was prescribed by the Jewish and Roman laws, and is still by the English; and where both consent, provided the one on whom it is committed is above the age of fourteen, both are punished. In this state, it was also formerly made capital, but now is changed to imprisonment for life.

* Zacchias, vol. 1, p. 382. Foderé, vol. 4, p. 374. Mahon, vol. 1, p. 138.

CHAPTER VI.

PREGNANCY.

1. Laws of various countries concerning the presence of pregnancy in civil and in criminal cases. 2. Signs of real pregnancy—reasons of the difficulty of ascertaining it in medico-legal cases. Notice of the principal signs: Enlargement of the abdomen—diseases that may produce this: Appearance of the areola: suppression of the menses—circumstances that may mislead with this: Nausea, &c.: Motion of the fœtus; Quickening—explanation of this term—variety as to its occurrence: Examination of the state of the uterus—of its neck by the speculum: examination of the vagina; condition of the blood, urine, and salivary glands: Auscultation—directions for its application. Impropriety of relying on any single proof of pregnancy—extra uterine pregnancy—pregnancy complicated with dropsy. Concealed pregnancy—pretended pregnancy: Circumstances to be noticed—the age of the individual—state of the menstrual function—variety in the period of its commencement and its return. Diseases that may be mistaken for pregnancy—moles—hydatids—physometra, &c. 3. SUPERFŒTATION. Cases that have been deemed instances of it: A blighted and a perfect fœtus—different coloured children—children born at considerable intervals. Explanation of these cases by the opponents of the doctrine. Double uteri. Application of superfœtation in legal medicine. 4. Whether a female can become pregnant, and remain ignorant of it until the time of labour: Cases in which this has been deemed possible.

Few questions occur in legal medicine, of greater importance than the one we are about considering. On its proper decision may depend the property, the honour, or the life of the female. It will probably lead to a better understanding of this subject, if we notice,

1. The laws of various countries relating to the presence of pregnancy.

2. The signs of real pregnancy, together with the best mode of ascertaining concealed or pretended pregnancy.

3. The arguments and proofs in favour and against the doctrine of superfœtation. And,

4. Some questions arising out of the previous examination.

I. *Of the laws of various countries which relate to the presence of pregnancy.*

The Roman law exempted a condemned female from punishment, if she was pregnant, until after her delivery—"quod prægnantis mulieris damnatæ pœna differatur quoad pariat."

There are two leading cases in the English or common law, which may require a knowledge of the signs of pregnancy. One is a proceeding at common law, "where a widow is suspected to feign herself with child, in order to produce a supposititious heir to the estate. In this instance, the heir presumptive may have a writ *de ventre inspiciendo*, to examine if she be with child or not; and if she be, to keep her under proper restraint until delivered; but if the widow be, upon due examination, found not pregnant, the presumptive heir shall be admitted to the inheritance, though liable to lose it again on the birth of a child within forty weeks from the death of a husband."

The interest that cases of this nature sometimes occasion, and the precautions that have been taken in England, may be learned from the following report. Sir Francis Willoughby died, seised of a large inheritance. He left five daughters, (one of whom was married to Percival Willoughby,) but not any son. His widow at the time of his death, stated that she was with child by him. This declaration was evidently one of great moment to the daughters, since if a son should be born, all the five sisters would thereby lose the inheritance descended to them. Percival Willoughby prayed for a writ *de ventre inspiciendo*, to have the widow examined; and the sheriff of London was accordingly directed to have her searched by twelve women, &c. Having complied with this order, he returned that she was twenty weeks gone with child, and that within twenty weeks, *fuit paritura*. "Whereupon another writ issued out of the common pleas, commanding the sheriff safely to keep her in such an house, and that the door should be well guarded; and that every day he should cause her to be viewed by some of the women named in the writ, (wherein ten were named,) and when she should be delivered, that some of them should be with her to view her birth, whether it be male or female, to the intent there should not be any falsity." And upon this writ, the sheriff returned, that accordingly he had caused her to be kept, &c., and that such a day she was delivered of a daughter.*

* Croke's Elizabeth, p. 566. See also, in the matter of Martha Brown, *ex parte* Wallop, in Brown's Chancery Cases, vol. 4, p. 90; *ex parte* Aiscough, Peere Williams' Reports, vol. 2, p. 591, *ex parte* Bellet, Cox's Chancery Cases, vol. 1, p. 297. Another case of the same nature has very recently occurred in England. Mr. Fox of Uttoxeter, died aged 60, in May 1835, leaving a widow to whom he had been

The other instance is evidently borrowed from the Roman law, as quoted above. When a woman is capitally convicted, and pleads her pregnancy, though this is no cause to stay the judgment, yet it is to respite the execution till she be delivered. "In case this plea be made in stay of execution, the judge must direct a jury of twelve matrons, or discreet women, to ascertain the fact, and if they bring in their verdict, *quick with child*, (for barely, *with child*, unless it be alive in the womb, is not sufficient,) execution shall be staid generally till the next session, and so from session to session, till either she is delivered, or proves by the course of nature not to have been with child at all."*

"Here (says Dr. Paris) the law of the land is at variance with what we conceive the law of nature, and it is at variance with itself; for it is a strange anomaly, that by the law of real property, an infant in *ventre sa mere*, may take an estate from the moment of its conception, and yet be hanged four months after for the crime of its mother."† In the striking language of Dr. Kennedy, "the maxim of British law is, that a child in the *fifteenth* week of its foetal existence, is to be deprived of life, for its mother's crime, whilst a child in the *sixteenth*, is to be protected from such an unjust and unmerited fate." Nor is the evil confined to this. The manner of administering the law, is equally repugnant to the dictates of humanity and justice. "A jury of twelve matrons or discreet women," are little calculated to decide on the presence or absence of pregnancy, at the very period when, (as we shall hereafter see,) there is often the greatest doubt. A few examples will strikingly illustrate this. Ann Hurle, condemned for forgery at the Old Bailey, in 1804, as a last resource, pled pregnancy. She contrived so to baffle the skill of the female

married about six weeks. Shortly afterwards, she announced herself with child, and the presumptive legatee applied for the writ *de ventre*. He did not ask for the old writ of a mixed jury of matrons and men, but only that she should be examined by some professional man of his own selection. The widow opposed it, but said she was willing to answer *any questions*. The surgeon who had attended Mr. Fox, swore that he had examined Mrs. Fox, and believed her to be pregnant. He also expressed his apprehensions, if an additional examination was persisted in, of peril to her health, and to the life of the unborn infant. The Vice Chancellor (in whose Court this case occurred) let it stand over for a month, but as there was then no arrangement between the parties, he directed the master to appoint two matrons, who with a medical man on each side, should visit Mrs. Fox once a fortnight, giving her two days notice of each visit. At the end of the usual period she was delivered of a son and heir. London Med. Gazette, vol. 16, p. 697. Vol. 17, p. 191.

* Blackstone, vol. 4, p. 394, 395. † Paris, vol. 3, p. 141.

examiners, that they could not come to any decision. The sheriff had recourse to the judgment and experience of Dr. Thynne, who declared that she was not pregnant, and she was executed. In a case that happened in Ireland, where also the female jury could not decide, some of them were *unmarried*, and not one of them ever attended a lying-in case. (Kennedy, p. 195.) But they are sometimes not contented with the confession of ignorance. At Norwich, (Eng.) in March, 1833, a murderess pled pregnancy. Twelve married women, after an hour's investigation, returned a verdict that she was not quick with child. She was ordered for execution, when three of the principal surgeons in the place, fearing that there might be a mistake, waited on the convict, examined her, and found her not only pregnant, but *quick with child*. They ascertained this by manual examination. On a representation to the judge, she was respited; and on the 11th of July, was safely delivered of a living child.*

In Scotland, a pregnant female is entitled to have sentence delayed; or if it has passed, to be respited, till her delivery takes place; and that equally whether *she be quick with child or not*.†

Foderé and Capuron appear to have examined every law in the French code, which has a bearing on this subject. The civil code, sect. 185, declares, that no female shall be allowed to con-

* London Medical Gazette, vol. 12, p. 24, 585. Kennedy, p. 200. Mr. Smith, who has added some legal notes to Dr. Kennedy's work, has ingeniously argued that the above provision is not contained in the ancient common law, and that all which it required, was the presence of pregnancy. I fear, however, that the quotation from Blackstone gives the *actual* law of England.

† Alison's Practice of the Criminal Law of Scotland, p. 654. The English courts will also interfere, when a pregnant female has been imprisoned. Thus, in the case of Elizabeth Slymbridge, (Croke's James, 358,) "upon suggestion that she had been imprisoned for divers weeks, and was with child, and would be in danger of death, if she should not be enlarged," Sir Edward Coke, the chief justice, admitted her to bail, to prevent the peril of death to her and her infant; and in giving his opinion, he cites a similar case, which happened in the 40th of Edward III. The editor remarks, that *these cases are cited as extraordinary instances*. The last case is mentioned in Coke Littleton, 289, a. The record states, "Quia eadam Elena pregnantis fuit, et in periculo mortis, ipsa dimittitur per manucaptionem, &c. ad habendum corpus, &c." And recently, legal protection has been extended to witnesses who may be pregnant. In an act, passed 1 William IV, (chap. 22,) and entitled "An act to enable courts of law to order the examination of witnesses upon interrogatories and otherwise," it is directed, among other things, that no examination or deposition shall be read in evidence, unless it shall appear to the satisfaction of the judge, that the examinant or deponent is unable, from permanent sickness, or other permanent infirmity, to attend the trial. In the case of Abraham v. Newton, (8 Bingham's Reports, 274,) the question came up, whether pregnancy and imminent delivery was a cause for examination under this act. It was decided, that it might be; but it must be shown by the affidavits of competent persons, that the delivery will probably happen about the time fixed for the trial of the cause.

tract marriage before the age of fifteen full years. Nevertheless, such marriage shall not be dissolved, 1, when six months have elapsed after the female, or both of the parties, have attained the required age; and 2, *when the female, although not of the required age, has become pregnant before the expiration of six months.* The penal code, sect. 27, also declares, that if a female, condemned to die, states that she is pregnant, and if it be proved that she is so, she shall not suffer punishment until after her delivery. Several other laws are mentioned, which, by implication, may be referred to this subject, but it is not necessary to state them. The above are the important ones now in force in France.* I may, however, add, that the law last quoted, was in existence and has been acted upon since the year 1670, in that country.†

The following is a recent enactment in the state of New York, intended to take the place of the common law.

“If a female convict, sentenced to the punishment of death, be pregnant, the sheriff shall summon a jury of six physicians, and shall give notice to the district attorney, who shall have power to subpoena witnesses. If on such inquisition, it shall appear that the female is quick with child, the sheriff shall suspend the execution, and transmit the inquisition to the governor. Whenever the governor is satisfied that she is no longer quick with child, he shall issue his warrant for execution, or commute it, by imprisonment for life in the state prison.”‡

II. *Of the signs of real pregnancy, and of concealed and pretended pregnancy.*

In the ordinary practice of medicine, but little difficulty ever occurs in ascertaining the presence of pregnancy. The female,

* Foderé, vol. 1, p. 421 to 432. A law, passed on the 23d Germinal, year 3, (1795) was still more mild in its provisions. It prescribed, that no woman accused of a capital crime, *should be brought to trial, until it was properly ascertained that she was not pregnant.* In conformity with this, the court of cassation reversed several decisions of inferior criminal courts, where it appeared that the female had not been properly examined; and it seems, indeed, that it demanded proof, that in such cases the examination had always been made. (Ibid. p. 428 to 431.) This is probably abolished, as no mention is made of it in the code now in force.

† I take the following from a newspaper: “The supreme court of Massachusetts, at its law session in Boston, in March, 1834, decided, that a grandchild born eight months and a half after the death of his grandfather, is included in a bequest to grandchildren ‘*living at his decease.*’”

‡ Revised Statutes, vol. 2, p. 658.

when she consults a physician, is frank in her avowal of the symptoms present; and from her narrative, an opinion sufficiently accurate can generally be formed. The reverse, however, takes place in legal medicine. Here, pregnancy may be **CONCEALED** by unmarried women, and even by married ones under certain circumstances, to avoid disgrace, and to enable them to destroy their offspring in its mature or immature state. It may also be **PRETENDED**, to gratify the wishes of relatives—to deprive the legal successor of his just claims—to extort money, or to delay the execution of punishment.

Neither of these can be properly investigated, without recurring to the signs of real pregnancy, and this remark deserves particular notice, since, with all the light that modern science affords, serious errors have, notwithstanding, been committed. The female has an interest, and a wish to deceive the examiner, and her testimony, which, in ordinary cases, is so much relied on, is here suspicious, or not to be credited.

Mahon has suggested a useful division of the signs of pregnancy, viz. those which affect the system generally, and those which affect the uterus.*

The changes observed in the system from conception and pregnancy, are principally the following: increased irritability of temper, melancholy, a languid cast of countenance, nausea, heart-burn, loathing of food, vomiting in the morning, an increased salivary discharge, feverish heat, with emaciation and costiveness, occasionally depravity of appetite, a congestion in the head, which gives rise to spots on the face, to headache, and erratic pains in the face and teeth. The pressure of increasing pregnancy, occasions protrusion of the umbilicus, and sometimes varicose tumours, or anasarcaous swellings of the lower extremities. The breasts also enlarge, an areola, or brown circle, is observed around the nipples, and a secretion of lymph, composed of milk and water, takes place.

All of these do not occur in every pregnancy, but many of them in most cases.

* Mahon, vol. 1, p. 142. In considering this subject, I rely mainly on the opinion of men skilled in the science of midwifery, and accordingly have particularly noticed the works of Dr. Kennedy, (*Obstetric Auscultation*.) Dr. Gooch, (*Diseases of Women*, chap. 3, and *Midwifery*.) Dr. Davis, (*Obstet. Medicine*.) Dr. Blundell, (*Lectures*.) Dr. Denman. Dr. Dewees. Mr. Ashwell. Dr. Ryan. Mr. Hogben. Professor Capuron. Dr. Montgomery, (*Cyclopedia of Practical Medicine*, *art. Pregnancy*.)

The changes that affect the uterus, are—a suppression of the menses. These cease returning at their accustomed period. An augmentation in the size of the womb. This is not perceptible until between the eighth and tenth weeks. At that time, the fœtus, with the surrounding membranes, and the waters contained in them, so enlarge it, that it may be felt lower down in the vagina than formerly; nor does it ascend, until it becomes so large as to arise out of the pelvis; and this is accomplished at about the fourth month.* In the intermediate space, an examination *per vaginam*, will discover the uterus to be heavier and more resisting; and by raising it on the finger, this indication will be particularly remarked between the third and fourth months. “In general in the fourth month, the fundus of the uterus may be felt, especially in a thin person, above the anterior wall of the pelvis.” The enlargement continues, and becomes visible during the fifth month, it rises to half-way between the symphysis pubis and the umbilicus; in the sixth month (seventh according to some authors) it is as high as the umbilicus; at the seventh, half-way between the umbilicus and scrobiculus cordis, and at the eighth, it has reached the latter—its highest elevation.† A short time before delivery, it somewhat subsides.‡ About the middle of the pregnancy, or between the seventeenth and twenty-second weeks, the female feels the motion of the child, and this is called *quickening*. Its variations as to time will be hereafter noticed. The vagina is also subject to alteration, as its glands throw out more mucus, and apparently prepare the parts for the passage of the fœtus.

These, as now stated, are the signs of pregnancy usually enumerated. It would not, however, be doing justice to the subject, if the reader were left to suppose that all or most of them are the invariable attendants on pregnancy. Some may accompany diseases: others may be altogether wanting in a state of true preg-

* “In pregnancy, the uterus does not rise out of the pelvis, before the third month.” (Gooch, *Diseases of Women*, p. 209.)

† I have adopted the *periods* stated by Dr. Montgomery for these changes. It is proper, however, to add that some writers on midwifery postpone the three last to a month later in each case.

‡ “The uterus, at the end of the third month, generally measures from the mouth to the fundus, above five inches, one of which belongs to the cervix; on the fourth, it measures five inches from the fundus to the beginning of the neck; in the fifth, about six inches from the cervix to the fundus. In two months more, it measures eight inches, and at the ninth month, ten or twelve inches, and is oviform in its shape.” (Ashwell on Parturition, p. 137.)

nancy. It will, therefore, be proper to examine the more important signs in detail.

1. *Of the expansion or enlargement of the abdomen.*—This sign is not visible during the first months; and after that period, it may be concealed for a length of time by various means, such as the peculiar disposition of the dress, and the confinement of the abdomen by stays. Formerly, fashion lent its aid to this deception. As early as 1563, satires were written in France on the articles of dress that were used to increase the size of the female figure, both before and behind; and in 1579, in the reign of Henry III. these were in general use. Cotemporary writers considered them, and not without great reason, as subservient to, and productive of great depravity in manners, and particularly for the concealment of pregnancy.* Another circumstance that may lead to error, is the variety that exists with respect to corpulence or peculiarity of form. This, in some instances, conduces to render the question doubtful; so much, indeed, as in some cases to exhibit hardly any tumour. Waiving these, however, we observe, that this sign is generally observed at the end of the fourth month. It then remains to inquire whether the enlargement is the result of pregnancy or of disease. If the former, it has generally some peculiarities, which serve to distinguish it. The enlargement is progressive from the fourth month to delivery; and by the fifth month, it can scarcely pass unnoticed, particularly if the female be standing. Recollect also, that the uterus lays in front of the abdominal cavity, and occupies the lower and middle parts. It grows from below upwards, and remains for a long time flattened at its sides, and a little puffy beneath the ribs, while in front, it is hard and prominent.†

But the enlargement may originate from disease—from suppression or retention of the menses—tympanites—the various species of dropsy—or schirrosity of the liver and spleen.

* British Critic, vol. 7, p. 539.

† Gooch, Blundell, Velpeau. "I will give you a little advice as to the unmarried class. Never give an opinion till six months have elapsed since the last menstruation. Do not believe one word they say. Listen to them as you would to a jockey praising his horse. *Never rely upon the evidence of their tongues, but on that of their ———.*" (Gooch's Midwifery, p. 103.) The uncertainty mentioned above, will be understood, by citing a case that occurred to Dr. Montgomery, of imperforated hymen in a girl of 17. All the symptoms allowed above were present, and along with them, the *breasts were painful*. (Cyclopedia of Pract. Med. vol. 3, p. 472.) Dr. Kennedy adds to the common symptoms, distention of the breasts, with darkened areola, p. 166.

In retention of the menses, and particularly if accompanied with imperforate hymen, the abdominal enlargement is remarkably similar to that of natural gravidity. It occupies the anterior part of the abdomen, and presents the same character as to resistance and hardness, as is given by the pregnant uterus. It also gradually ascends, and is accompanied by no distinct fluctuation, as in ascitic dropsy. Pain and vomiting may also be present. On the other hand, however, the uterus is found unaltered in size; no motion can be felt by the examiner; and above all, the fact of retention will appear on inquiry, and the hymen generally be found distended.* So also, if this last be not present. The symptoms occurring from time to time should be carefully studied.†

In tympanites, the abdomen is hard and elastic, and sounds like a drum when pressed; and there are irregular elevations, which appear to roll under the finger. Continued pressure causes the air to yield before it, which may thus be urged from one part to the other; but the intumescence of pregnancy is firm and unyielding.

Dropsy also, when not encysted, is marked by its peculiar characteristic and local symptoms. The swelling appears general over the abdomen, and is not confined to the space over the pubis. "It is soft to the touch, wanting the solid and consistent feel observed in pregnancy, and diseased uterine, and sometimes ovarian structures." There are also marked indications of disease in various organs, which serve to establish the nature of the complaint.

Frequent mistakes have, however, been made, and these

* Davis' *Obstetric Medicine*, p. 106. He gives a long list of references to cases of imperforate hymen.

Dr. Montgomery quotes others and mentions one that came under his own notice, in a girl of 17. The abdomen was enlarged, the uterus could be felt as high as the umbilicus, the breasts were painful, there was occasional vomiting, with pain in the back and along the thighs. On passing the catheter (there was an inability to pass the urine) an imperforate hymen was discovered. (*Signs of Pregnancy*, p. 51.)

† An instructive case, showing the doubts which envelope some cases of suppression of the menses, and the equivocal symptoms to which it gives rise, is related by Dr. Dewees, in *Chapman's Journal*, vol. 4, p. 126. The female had not menstruated for a year—her breasts swelled—she had nausea and vomiting in the morning, and Dr. D. thought, on examination, that he perceived motion. As the female was unmarried and irreproachable, proper medicines were prescribed, which relieved her only for a time. Finally, on treating it as a case of ascites, there was manifest improvement, and the disease ended with a sudden gush of fluid blood from the vagina.

should teach great caution. "I was desired (says Sir Astley Cooper) to see a lady, who I was told laboured under dropsy. When I entered the room, I saw a tall, delicate female, with an immense abdominal swelling, giving a distinct sense of fluctuation. I requested the physician accoucheur, whom I met, to examine if the lady was not with child; he said, he thought it was unnecessary, as the fluctuation was very distinct; but that he would do so, and let me know the result in a few days. I heard no more of her for a week, and then I learned that she had been put to bed on the morning following my visit."*

Encysted dropsy is often more difficult to be understood; as here we are not to expect fluctuation. The symptoms should be carefully noted, as they daily become more aggravated in this disease, while the slighter affections of pregnancy generally wear off. The cervix uteri also, in ovarian dropsy, is of its natural size and length; and the tumefaction is often distinct in its character from that of the gravid uterus. But it may be, that there is an enlarged ovary with pregnancy in the same person. The tumours, says Dr. Gooch, in such instances, go on growing side by side; and he has known instances where living and healthy children were born, leaving the abdomen still distended with the ovary. The case here (he observes) is puzzling. Suppressed menstruation is common in ovarian dropsy; the enlargement of the uterus may be mistaken for the ovarian enlargement; the child may be feeble or dead, and protrusion of the umbilicus attends each. Patient and assiduous examination is evidently necessary, and a particular attention to all the leading proofs of pregnancy.†

* Lectures, vol. 2, p. 163. A case, detected by the application of the stethoscope, is quoted from Prof. Elliotson, in *Lancet*, N. S. vol. 7, p. 656.

† Gooch, *Diseases of Women*, p. 239. The following are the remarks of Dr. Francis H. Ramsbotham on this subject. "A dropsical ovary may be confounded with pregnancy, especially as milk is sometimes secreted in this disease, but the menses most likely will not be suspended. Besides, the tumour does not possess the elastic springy feel which characterizes the gravid uterus when near the termination of pregnancy. The increase of swelling will be more or less rapid, than the growth of the womb, and there will be no movement felt within it. But one of the best diagnostic marks by which it can be known from other abdominal tumours is the situation it occupied when first observed. An enlarged ovary invariably shows itself above one or other groin—the gravid uterus in the centre." It may be distinguished from ascites, in being circumscribed. In ascites also, there is a diminution of urine,—but not so in an enlarged ovarium unless it has made great progress, and then in consequence of pressure. *London Med. Gazette*, vol. 16, p. 645. "If there be enlargement of the ovary, independent of pregnancy, the uterus will be found forced so low down into the vagina, that its actual condition cannot be misunderstood." Prof. Hamilton's *Practical Observations on Midwifery*, p. 29.

On schirrosity, it is sufficient to remark, that patience and judgment will generally teach us to distinguish its peculiarities, particularly as it is accompanied with striking and chronic indications of disease.

But even if we have settled that neither of the above diseases is present, and that there is an actual tumour of the uterus, it is not certain that it is caused by a foetus: It may arise from a mole—from hydatids in the uterus, and various other diseases of that organ. These remarks sufficiently prove that enlargement of the abdomen is an uncertain sign in determining the presence of pregnancy.* We have also to remember that the foetus may die at any period, and be retained. Here, of course, there will be no increased enlargement noticed, and yet there has been pregnancy.†

2. *A change in the state of the breasts*, has by many been considered as a sign. They are said to grow larger and more firm, while the areolæ round the nipples become of a brown colour; and this is accounted for on the principle of revulsion—the blood, after the cessation of the menses, being determined upwards, in consequence of the connexion that subsists between the breasts and uterus, through the anastomosis between the epigastric and internal mammary arteries. Milk also is secreted.

* Nor must we always suppose that a sudden reduction of size after enlargement, has been owing to pregnancy and its results. Dr. Montgomery saw “an instance in a woman separated from her husband, who became affected with what was considered ovarian dropsy, and which enlarged the abdomen to the size of six months’ pregnancy, some of the other symptoms of which state were also present. After an attack of inflammation, during which it is to be presumed the parietes of the tumour formed an adhesion with the upper part of the vagina, there took place suddenly a discharge of gelatinous fluid from that cavity, and the abdomen completely subsided in the course of a day, and the previous entertained suspicion appeared to be confirmed beyond a doubt; but on examination, the woman had not about her one of the signs of delivery; yet, had not the case been at once investigated, loss of reputation at the least would have inevitably, though most undeservedly, followed.” (*Cyclopedia of Practical Medicine*, vol. 3, p. 503, Art. *Pregnancy*.) A similar case is given in *Medico-Chirurgical Review*, vol. 24, p. 206.

† If an examination at an early period of pregnancy be deemed necessary, the following directions of Foderé and Mahon should be observed: Empty the intestinal canal, and let the female lie on her back, with her knees a little elevated, so as to prevent any tension of the abdomen. If the woman be not too fat or deformed, the uterus may be felt through the parietes of the abdomen, by applying the extended hand over the middle of the hypogastrium, so that the thumb touches the navel, and the small finger the pubis. On her making an expiration, the enlarged uterus may be felt, hard, and of a spherical form. If these be present, they indicate an increase in size of the uterus, but not the cause of it. (Foderé, vol. 1, p. 443. Mahon, vol. 1, p. 149.) See also Smith, p. 485.

Now all these have been questioned or denied as proofs of the presence of pregnancy. *Enlargement of the breasts* occurs in suppressed menses, and sometimes at the period of the cessation of the menses.* Occasionally they do not enlarge until after delivery. The most unequivocal state is where, during a first pregnancy, they become full and tender, and have an appearance approaching to inflammation; and particularly if, previous to connexion, they have been small. We must not mistake their enlargement from corpulence, as this will be equally manifest in other parts of the body. (*Blundell.*)

A still greater diversity of opinion exists as to the *appearance of the areola*. I will quote several of the leading authors. Dr. Gooch says that the dark colour is very distinct in women with dark eyes and hair; but it is often difficult to tell whether it exists or not, in those of a light complexion. In brunettes, it remains dark ever afterwards, and hence is no guide in future. He had, however, recently seen two young and newly married women, who were not pregnant, in whom the areola was dark. In chronic inflammation of the uterus, he had also known this colour produced, together with fulness and pricking pains in the breast. Notwithstanding these exceptions, he advances the opinion that this appearance rarely depends on other causes; and when it exists, deems it a sign either of present or previous pregnancy. He informs us, also, that Dr. Hunter relied greatly on it, and asserted that he could judge by it whether or not a woman was pregnant. "A subject was brought to him for anatomical purposes; but on looking at the breast, from the appearance of the areola, he declared that the female died while pregnant. One of his pupils examined, and found that she had a hymen. This seemed a contradiction; but the doctor still adhered to his opinion, and thought more attention due to the former than the latter appearance. On opening the body, his assertion proved just, for the uterus was found impregnated." (*Lowder. M. S. Lectures.*)

Dr. Dewees deems it equivocal, *except in a first pregnancy*; and he also remarks, that sometimes it is not present. Ashwell mentions three instances, in which there was no pregnancy.

Dr. Denman was of opinion that the areola was present in

* John Pearson. (*Medico-Chirurgical Review*, vol. 4, p. 838.) Denman, p. 227.

many of the complaints which resemble pregnancy, and it is stated on high authority, that a completely formed areola has been seen in cases of dysmenorrhœa.*

On the other hand, White (*Regular Gradation of Man.*) states that he one morning examined the breasts of twenty women in the Lying-in Hospital in Manchester, and found that nineteen of them had dark-coloured nipples—some of them might be said to be black; and the areola around the nipple, being from one inch to two and a half inches in diameter, was of the same colour.

Dr. Blundell relies greatly on it. He states that there are three varieties of it, numerically discriminated according to the degree of change. "When the alteration rises to the highest point—when the areola becomes broad and dark, and embrowned in fullest measure; more especially when pale before, it changes to a deep brown, so dark that it reminds one of the skin of the negro, the indication ought to have great weight, at least in a first pregnancy." In several instances where its existence was positively denied, he thus detected it; and it has the advantage of manifesting itself very early in gestation. When the change is only in the first or second degree, or when it occurs in females who have been pregnant before, less reliance is to be placed on it.

Dr. Montgomery, in his elaborate and valuable article on the signs of pregnancy, remarks, that much of the discrepancy that exists on this point, is owing to exclusive attention to one of the characters, viz. the colour, and which he conceives of all others the most liable to uncertainty. He attaches, however, great importance to the appearance of the areola as a result of pregnancy; and I shall therefore mention the circumstances deemed by him to be characteristic.

As early as the second month, he has noticed a change of colour; but in general it is then little more than a deeper shade of rose or flesh colour, slightly tinged with a yellowish or brownish hue. During the next two months it is usually perfected, and varies in intensity with the peculiar complexion of the individual—being generally much darker in persons with dark hair, dark

* British and Foreign Medical Review, vol. 4, p. 184. The reviewer adds, that Dr. Hugh Ley was of the same opinion.

eyes and sallow skin, than in those of fair hair, light-coloured eyes, and delicate complexion. In negro women, the areola is almost jet black. The extent of this circle varies in diameter from an inch to an inch and a half, and increases in some as pregnancy advances. In a recent case, Dr. Montgomery found it, at the time of labour, to exceed three inches in diameter.

But in connexion with these changes, and as confirmatory of their cause, the following are also observed: The nipple partakes of the altered colour of the part, and appears *turgid* and *prominent*; and the part of the areola more immediately around its base, has its surface rendered unequal by the prominence of the glandular follicles, which, varying in number from twelve to twenty, project from the sixteenth to the eighth of an inch; and lastly, the integument covering the part is observed to be softer and more moist (sometimes so as to damp and colour the woman's inner dress,) than that which surrounds it. Such (he adds) we believe to be the essential characters of the true areola, the result of pregnancy; and that when found possessing these distinctive marks, it ought to be looked upon as the result of that condition alone, no other cause being capable of producing it.

These appearances, says our author, are striking from the fifth month to the end of the pregnancy. The breasts are generally full and firm, and venous trunks of considerable size are seen ramifying over the surface and sending branches toward the disk of the areola which several of them traverse. Along with these vessels, the breasts not unfrequently exhibit, about the sixth month and afterwards, a number of shining, whitish, almost silvery lines like cracks; these are most perceptible in women who, having had before conception very little mammary developement, have the breasts much and quickly enlarged after becoming pregnant.

The observer must, however, understand that pregnancy may be present, and the colour be wanting. In two cases mentioned and seen by Dr. Montgomery, the areola could hardly be distinguished in this respect from the surrounding skin, yet all the other changes just mentioned were well developed. Again, it must be recollected, that in persons who have recently miscarried, and in nurses, the characters of the areola are kept up, and continue for some time. It is also conceded by our author, that in some cases the colour remains permanent after a first pregnancy.

Lastly, Dr. Hamilton of Edinburgh relies greatly on the perceptible change on the surface of the breasts surrounding the nipples as a sign of pregnancy in the early months. In fair women, when in that state, the areola becomes marked towards the end of the third month, and it gradually grows darker, so that after the fifth month, it is of a brownish tint. But in those of a dark complexion, it becomes after the third month, so deep as to resemble old mahogany, while in swarthy females, where the appearance in the virgin state is mahogany coloured, the progress of pregnancy gradually converts it into a black purple. He adds that for many years, "the mark on which he has placed his principal reliance for distinguishing the true areola consequent on pregnancy, from the appearance of the surface of the mammæ peculiar to the individual in the unimpregnated state, is a certain degree of *turgescence* on the surface of the discoloured ring, which becomes more and more distinct towards the latter end of pregnancy." Menstruation may indeed produce a certain degree of turgescence, but it is merely temporary, and he distinctly denies that the change in question takes place in any of the complaints resembling pregnancy.

I apprehend that the authorities which I have given on this sign, will incline the reader to attach considerable importance to its presence.*

The *secretion of a milky fluid* may occur without the presence of pregnancy. Hebenstreit states that he has known females in whom this fluid was produced by repeated friction, suction, &c.† A servant girl, says Belloc, slept in a room with a child whom it was wished to wean. Being disturbed in her repose by its cries,

* Gooch's Diseases of Women, p. 201, &c. and Midwifery, p. 100. Dewees's Midwifery. Ashwell, p. 171. Lawrence's Lectures, p. 449. Blundell's Lectures. Lancet. N. S. vol. 3, p. 325. Montgomery's Signs of Pregnancy, chap. 4. Hamilton's Practical Observations on Midwifery, p. 46. In a subsequent publication (Letter to Dr. James Johnson,) Dr. Hamilton avows his full concurrence in the statements of Dr. Montgomery.

In addition to the sign now considered, Mr. Ingleby mentions two changes connected with it, as indicative of pregnancy and which I may state in this place. "The first consists of a very scaly state of the cuticle covering the areola; the second, in a discoloration, not very unlike the areola and partially affecting the whole surface of the breasts. The breasts present a curious mottled or chequered appearance, of an irregularly brown hue, with intervening spaces, defined in extent, circular in form and as white as the skin over the body in general. The last mentioned appearance is strongly presumptive of pregnancy." Ingleby's facts and cases in Obstetric Medicine, quoted in Amer. Journal Med. Sciences, vol. 20, p. 435.

† Hebenstreit, p. 185.

she imagined that by putting it to her breasts, it might be quieted. In a short time she had milk sufficient to supply its wants.* An account is also given in a manuscript in the collection of Sir Hans Sloane, of a woman of the age of sixty-eight, who had not borne a child for more than twenty years, nursing her grandchildren one after another.† Similar cases are mentioned by Foderé; and in particular, he relates an instance of a female, who, on the point of being conducted to prison, declared herself a nurse. Although this was a falsehood, yet in a few moments she produced the requisite proof. The author also suggests, that immediately after the cessation of the menses, milk is often secreted.‡

* Belloc, p. 70. Dr. Dewees witnessed its secretion in a female who had never been pregnant; Baudelocque, in a girl eight years old in the village of Alençon, who was presented to the Royal Academy of Surgery, Oct. 1783. (*Midwifery*, v. 1, p. 219.)

† Smith, p. 484. There are several cases on record of grandmothers suckling:—One aged 60. (*Philosophical Transactions*, vol. 9, p. 100.)—One seen by Dr. Stack, and aged 63. (*Philosophical Transactions*, vol. 41, p. 140.)—A negro grandmother aged 70, seen by Dr. Farquhar in the Island of Jamaica. (*Coxe's Medical Museum*, vol. 1, p. 267.)—A case by Dr. Montegré in France, female aged 65. (*Cas rares*, in *Dictionnaire des Sciences Médicales*.)—A case by Mr. Semple in England. The grandmother was 49 years old, and continued to menstruate regularly during the time of suckling. (*North of England Medical and Surgical Journal*, vol. 1, p. 230.)—A case by Dr. Kennedy in England, of a woman who gave suck uninterruptedly from the twenty-fifth to the seventy-second year of her age; and now in her eighty-first year, had still a regular secretion of milk. (*Medico-Chir. Review*, vol. 21, p. 202.)—A case communicated to Dr. Campbell by Dr. Steintal of Berlin, a grandmother of 63 suckling a grandchild for seven months. (*Campbell's Midwifery*, p. 493.)

‡ Fodere, vol. 1, p. 440. The following case occurred to the late Professor Post of New York: "A lady of this city (New York) was, almost fourteen years ago, delivered of a healthy child, after a natural labour. Since that period, her breasts have regularly secreted milk in great abundance; so that, to use her own language, she could at all times easily perform the office of a nurse. She has uniformly enjoyed good health; is now about thirty-five years of age, and has never proved pregnant a second time, nor had any return of her menses."

Dr. Shurtleff, in the *Boston Medical and Surgical Journal*, vol. 1, p. 462, gives a case where the milk continued flowing for three years after delivery. Dr. Blundell mentions a similar instance in his *Lectures*.

Even men have suckled children. See the Bishop of Cork's case in *Philosophical Transactions*, vol. 41, p. 810, where the father had fed his child in this way. The bishop examined the breasts, and found them very large. Humboldt and Bonpland saw a similar case in South America. The mother was sick, and the father, aged 32, put the child to his breast in order to quiet it; milk shortly came. Another well authenticated case is mentioned by Capt. Franklin in his *Journey to the Polar Sea*, of a young Chippewyan whose wife died in labour. "Our informant," says Sir John Franklin, "had often seen this Indian in his old age, and his left breast even then retained the unusual size it had acquired in his occupation of nurse."

A case in Germany, of a young man, 22 years old, witnessed by Dr. Schmetzer of Heilbroun. The secretion of milk was constant. *London Med. Gazette*, vol. 20, p. 846.

Blumenbach gives a very rational explanation of this occurrence. The connexion between the uterus and breasts seems to depend on the anastomosis between the

3. *The suppression of the menses.* This may take place, as already stated, from disease, without the presence of pregnancy; and again, it is asserted that the menses have continued in certain cases during pregnancy.

It is important to understand the diversity of opinion that exists on this last point. Dr. Heberden knew a female who never ceased to have regular returns of the menses during four pregnancies, quite to the time of her delivery.* Deventer mentions of one who became pregnant before menstruating, and immediately after conception this discharge returned periodically until her delivery; and this was the case during several successive pregnancies—inverting, as it were, the usual order of nature.† Dr. Hosack had a patient, who, during her last three pregnancies, menstruated until within a few weeks of her delivery, and, notwithstanding, brought forth a healthy child at each labour.‡ Additional authorities are given below.

On the other hand, it is denied that this occurs. Dr. Denman deems suppression to be a never-failing consequence of conception. Dr. Davis is of opinion that *genuine menstruation has never existed during pregnancy*. The orifice of the uterus, he remarks, is then hermetically sealed, and it is incompatible with the safety of its contents, as is seen in the occurrence of hæmorrhage and premature discharge of the ovum. He is willing to allow (and

epigastric and internal mammary arteries, and this anastomosis exists in men as well as in women. (Medico-Chirurgical Review, vol. 13, p. 114.)

* Commentaries.

† Foderé, vol. 1, p. 437. Similar cases are mentioned by Baudelocque, &c.

‡ Haller refers to similar cases, (vol. 7, part 2, p. 142.) Of authors and observers in favour of menstruation, or rather a periodical discharge, during a part or the whole of pregnancy, I may mention Baudelocque, vol. 1, p. 230; Capuron, p. 63; Belloc, p. 62; Gooch, Diseases of Women, p. 203; Prof. Carus, American Medical Recorder, vol. 13, p. 421; Dr. Dewees; Dr. Blundell, Lectures; Dr. Power, Medico-Chirurgical Review, vol. 2, p. 413; Dr. Montgomery, Cyclopædia of Practical Medicine, Art. *Pregnancy*; Dr. Kennedy, p. 12, (who also quotes a case from Mauriceau.) Cases are related by Mr. Mayo, (in Middlesex Hospital,) London Medical and Surgical Journal, vol. 4, p. 179. Instances similar to those of Deventer are mentioned by Dr. Dewees, and by Stein, a German accoucheur. (American Medical Review, vol. 1, p. 411.)

Dr. Maunsell of Dublin, in his report of the obstetric practice at the Wellesley Female Institution during 1832, remarks thus: "Three cases were noted, in which a species of menstruation occurred during pregnancy. In one, a discharge of blood, which the woman could not distinguish from the menses, took place regularly every twenty-eight days." (Edinburgh Medical and Surgical Journal, vol. 40, p. 301.)

Dr. Campbell (Midwifery, p. 44,) had a case in which menstruation was regular during six months after conception.

I subjoin the following as I find it: "Dr. J. P. Frank had under his care a woman who had three healthy children, and yet had never had either catamenia or lochia." (Quarterly Journal of Foreign Medicine and Surgery, vol. 4, p. 324.)

this is the prevalent doctrine on his side) that cases of periodic discharge of blood occur, but not *menstruous*: It has an extra-uterine origin; and as the parts are in a state of plethora, the vaginal branches of the uterine arteries may furnish it.*

Probably the last is the preferable explanation. It is most consonant with our ideas of the phenomena of pregnancy. When applied, however, in medical jurisprudence, we must recollect the remark of Dr. Gooch, that whether it be menstruation or periodical hæmorrhage, from the above cause, or from partial separation of the ovum, the female cannot discriminate; and I may add, the examiner will often be in extreme doubt.

Menstrual blood does not coagulate. I feel justified in asserting this on the authority of Burns, Denman, Gooch, Charles Mansfield Clarke, Dewees, and a host of others; although I am aware that it is doubted and opposed by some.† Attention must, of course, be paid to this circumstance. It will be recollected that it was noticed in the case of Mary Ashford.

Dr. Lavagna of Milan ascertained that the menstrual secretion differed principally from blood, in containing little or no fibrine.‡ It is evident, however, on many accounts, that chemi-

* Davis's *Obstetric Medicine*, p. 253. Dr. Sims denied its existence, except in the form of manifest hæmorrhage. (*Ibid.* p. 257.)

John Burns (edition of 1823) says the weight of authority is decidedly against menstruation during pregnancy. In several cases that came under his own observation, although the discharge had considerable periodical regularity, yet he always found it to consist of pure coagulable blood. (P. 139.)

Hogben, Ashwell, and Ramsbotham entertain a similar opinion. The latter, however, mentions in his lectures, that he has a patient who always menstruates once after having conceived, though very sparingly. *London Medical Gazette*, vol. 13, p. 268.

Professor Hamilton, of Edinburgh, asserts that suppression of the menses *invariably* attends pregnancy during the early months and of course throughout its progress. He admits, however, that in a few cases, there are *irregular* bloody discharges during the first months. The practitioner, he adds, may distinguish these last from the menstrual fluid, by attending to three circumstances—the period of recurrence, the duration, and the quality of the discharge. Hamilton's *Practical Observations on Midwifery*, p. 45, and his Letter to Dr. James Johnson.

In the *Boston Medical Magazine*, vol. 2, p. 367, there is an interesting case given by Dr. Fisher, which I apprehend will assist in explaining this much discussed discharge. The female, ten weeks married, suffered under bloody discharges—at three weeks, and again at two weeks after that. For some time before her death, they were frequent. She died at the end of the above period; and although no impregnation was suspected, yet the case was found to be one of tubular pregnancy, and hæmorrhage from the placenta had been the cause of death.

† Mr. Clarke exhibited some at his lectures, which had remained in a fluid state for years. A very full and able statement in favour of the opposite doctrine, by Doctor Manley, is contained in the *New York Medical and Physical Journal*, vol. 4, p. 67.

‡ Anderson's *Journal*, vol. 1, p. 624. See, also, *Med. Chir. Review*, vol. 24, p. 95

cal tests are scarcely applicable in the present case. Not unfrequently the two discharges are blended together—some of the smaller vessels giving way at the very time that the secretion is going on.

I will add in this place, principally for the purpose of citing a case from Belloc, that pregnant females may feign menstruation by staining their linen with blood. This deception was attempted on him by a girl three months advanced.* Dr. Montgomery of Dublin detected the pregnancy of a female, who for two months had thus stained her linen, by examining the areolæ. They exhibited the characteristic appearance so perfectly, that he charged her with the fact. She was so completely taken by surprise, as to confess it.†

Notwithstanding the exceptions stated, we should attach great importance to the *absence of the menses* as indicating pregnancy; and the remarks of Belloc on this point are deserving of great attention: “When a female experiences the suppression, along with other symptoms of pregnancy, we may consider her situation as yet uncertain, because these signs are common to amenorrhœa and pregnancy; but if, towards the third month, while the suppression continues, she recovers her health, and if her appetite and colour return, we need no better proof of pregnancy. Under other circumstances, her health would remain impaired, and even become worse.”‡

4. I merely notice *loss of appetite, nausea, vomiting, &c. &c.* to state that they are equivocal. They accompany many diseases—are wanting in many pregnancies—and even if present, occur in the early stages, the time precisely when no certain judgment can be formed. There are, however, some points worthy of observation. If the sickness and vomiting occur only in the morn-

* Belloc, p. 65. “Il faut exiger alors que les parties soient lavées avec de l’eau tiède; si le sang ne réparait pas, le cas est suspect.” (Capuron, p. 81.)

† Cyclopædia of Practical Medicine, vol. 3, p. 472.

‡ Belloc, p. 60. Smith, p. 485.

Dr. Montgomery has, however, pointed out an occasional variety of suppression, which of all others is most likely to deceive. It is the case of young and newly married females, who in some instances have no return of the menses for two or three months, and the breasts enlarge, and yet, at the end of this or a longer period, ordinary menstruation recurs. In some instances, a gush of sanguineous blood and the ejection of flakes of membranes, resembling that discharged in dysmenorrhœa, terminate the above series of symptoms. It is highly probable, according to our author, that in some, at least, of these cases, conception has occurred, but the ovum perishing, no evidence is furnished of its existence.—Signs of Pregnancy, p. 44.

ing, and the patient is well during the rest of the day, it is suspicious. So also with *anasarcous swellings of the extremities*: If this comes on suddenly, and the patient is otherwise in good health, it is a sign of some importance, according to Dr. Blundell.

Dr. Denman was disposed to place much reliance on *protrusion of the navel*, in doubtful cases. It emerges, he observes, in pregnancy, until it comes to an even surface with the integuments of the abdomen. Mahon, Gooch, and Dewees, however, deny its infallibility. It occurs from dropsy, or any chronic enlargement. The reverse, however, may assist in some cases. If the umbilicus is depressed, and the abdomen soft and yielding, the existence of pregnancy is doubtful. It should be remembered that the protrusion seldom occurs before the sixth month; and the further the pregnancy is advanced, the more distinct it will be.

5. Another sign that has been depended on, is the *motion of the fœtus in the womb of the mother*. It is wanting in the early months of pregnancy, but during the latter ones, may generally be ascertained. This sensation, however, which in real pregnancy, the female always mentions at an early period, is of course not spoken of in concealed cases, and it remains with the examiner to discover it by other means. To this end, he dips his hand in cold water, and applies it suddenly over the region of the uterus. If the fœtus is alive, its motion will be felt, evidently depending on muscular power, except according to authors where it is very feeble, or where the woman is dropsical. But unfortunately, this sign is not infallible, the fœtus may be dead, or there may be twins, in which case the motion is sometimes not felt until a late period. On the other hand, flatus in the bowels, nervous irritation,* or a mole in the uterus, has been mistaken for it. A case, showing the uncertainty of its occurrence, is related by Capuron. A female, with a very large abdomen, was received into one of the hospitals of Paris. She

* Many of the French writers on midwifery speak of a "*fausse grossesse nerveuse*."

"The name of simulated pregnancy has been given to some cases of hysteria, in which the abdomen enlarges gradually, sickness occurs, and so many signs of an impregnated uterus are present, that time alone can solve the doubts they raise. The catamenia are suppressed, the breasts are tumid, and there is pain in the back." Mr. Tate says of these cases: "In what this enlargement consists I am utterly ignorant, that it is not merely a mere accumulation in the colon I know, that it is substantial I am equally sure." It is, we apprehend, a mixed state of vascular fulness and tympanitic distention. *Cyclopaedia Pract. Med. Art. Hysteria*, by Dr. Conolly.

was visited by many distinguished accoucheurs, surgeons and physicians. Some declared that she laboured under ascites—others, that a schirrous and dropsical ovarium was present. An abdominal pregnancy was also suspected, but no one believed it to be real pregnancy, since no motion of the fœtus could be felt. The woman was kept on light food, and innocent remedies were administered. The volume of the abdomen enlarged, and at last, after three weeks of examinations and consultations, a strong and healthy child was born.*

It may also be simulated. Dr. Blundell relates of a case, in his lectures, which was examined by Lowder, Mackenzie and other celebrated accoucheurs of their day, and where the female had attained such skill in counterfeiting, that they declared they would have been deceived, if they had not by personal examination found the uterus unenlarged.

The motion of the fœtus, when felt by the mother, is called QUICKENING. It is important to understand the sense attached to this word formerly, and at the present day. The ancient opinion, and on which indeed the laws of some countries have been founded, was, that the fœtus became animated at this period—that it acquired a new mode of existence. This is altogether abandoned. The fœtus is certainly, if we speak physiologically, as much a living being immediately after conception, as at any other time before delivery; and its future progress is but the developement and increase of those constituent principles which it then received. The next theory attached to the term, and which is yet to be found in many of our standard works, is, that from the increase of the fœtus, its

* Capuron, p. 73, 74. There are cases "though rare, where it does not occur during the whole of pregnancy, although the child has been born alive and vigorous. Of this I have known one instance and read of others." Gooch; *Diseases of Women*, p. 203. A case that occurred to Baudelocque and Vicq. D'Azyr is related in *Dict. des Sciences Med.* vol. 19, by Murat, Art. Grossesse. Dr. Kennedy corroborates this by his own experience, and also gives some striking instances of self-deception. Pages 25-27.

Dr. Montgomery says that two instances have come under his own observation of its total absence during the whole period of gestation, notwithstanding the subsequent birth of living and healthy children, and he quotes parallel cases from Levret, Gardien, Dewees, and Campbell. *Signs of Pregnancy*, p. 88.

Prof. Hamilton however questions the statement of Dr. Gooch, most emphatically. "It is to be remarked," he says, "that Dr. Gooch does not say, that in that instance, he made any attempts to excite the movements of the infant. The author holds all those alleged cases to be the offspring of prejudice and credulity." *Hamilton's Practical Observations on Midwifery*, p. 48.

motions, which hitherto had been feeble and imperfect, now are of sufficient strength to communicate a sensible impulse to the adjacent parts of the mother. In this sense, then, quickening implies the first sensation which the mother has of the motion of the child which she had conceived.*

A far more rational, and undoubtedly more correct opinion is that which considers quickening to be produced by the *impregnated uterus starting suddenly out of the pelvis into the abdominal cavity*. This explains several peculiarities attendant on the phenomenon in question—the variety in the period of its occurrence—the faintness which usually accompanies it, owing to the pressure being removed from the iliac vessels, and the blood suddenly rushing to them; and the distinctness of its character, differing, as all mothers assert, from any subsequent motions of the fœtus. Its occasional absence in some females is also readily accounted for, from the ascent being gradual and unobserved.†

This subject will again be noticed in the chapter on Abortion. At present, it will be sufficient to remark, that considerable variety occurs as to the *time* of quickening.

The extremes are probably from the tenth to the twenty-fifth week. Dr. Denman observes that it happens from the tenth to the twelfth week, but most commonly about the sixteenth, after conception. Dr. Dewees and Blundell agree that it most generally occurs nearer the fourth than the third month. Roederer kept a register of 100 women, as to the period of probable impregnation, quickening and delivery. Of these 80 quickened at the fourth month, a part of the rest at the third, and the remainder went to the fifth.‡ Dr. Montgomery found the greatest number of instances to occur between the end of the twelfth and sixteenth weeks, or adopting another mode of calculating, between

* See Denman, &c.

† Mr. Royston appears to have been the first that satisfactorily developed this opinion to the public, although he gives the credit to Dr. H. S. Jackson, of originally advancing the idea. See his paper copied from the London Med. and Phys. Journal, in *Eclectic Repertory*, vol. 3, p. 25.

Writers on Midwifery are embracing this opinion. (See Conquest, p. 38, *Hogben in London Med. Repository*, vol. 1, p. 146; Blundell and Burns; *Lancet*, N. S. vol. 3, p. 104; Dr. James in Burns' *Midwifery*, 1823, vol. 1, p. 208; Morley, p. 206; Campbell, p. 489; Davis, p. 854.) Dr. Dewees, however, is opposed to it, as is also Dr. Montgomery. The last distinctly felt the motions of a child in utero, while the mother had no perception of them. Here the uterus could be distinctly felt in the abdomen, and yet the mother did not quicken for nearly three weeks after. Dr. Kennedy suggests, that it may arise from either cause, p. 23.

‡ James' Burns, vol. 1, p. 208.

the fourteenth and eighteenth weeks after the last menstruation. The earliest cases that he has met with were one of eleven weeks and two days after conception, and 201 before delivery; and another, of 198 days before delivery; while on the other hand, he has attended cases where the quickening did not occur until the sixth and seventh months. In one instance, a lady, in seven successive pregnancies, felt the child for the first time in the sixth month and once in the seventh. Dr. Ramsbotham observes that "if the woman has quickened, she has passed sixteen weeks at least, and is probably near eighteen.* Again, Puzos, a celebrated continental accoucheur, says, that it takes place at the end of two months, but most commonly at the expiration of eighteen weeks. Hydropic women, he adds, do not observe it until the sixth or seventh month.† And in a late trial for abortion in England, the medical witness deposed, that it took place at eighteen weeks, sometimes in fourteen, and sometimes not till twenty weeks, but mostly at eighteen. That he never knew it so late as twenty-five, though it might happen in some cases, at twenty-one or two.‡

The only writer, who according to my knowledge speaks of any thing like a positive period is Dr. Hamilton. "More than forty years (says he) have elapsed, since I ascertained that, in general, quickening takes place at the completion of four calendar months after conception."§

The discordance in the observations of physicians is readily explained, by recurring to the cause just now assigned. And we may reasonably suppose that the motion in question will be soonest felt when the developement has been most rapid. The practical deduction respecting it, in a case of supposed pregnancy, is not to pronounce a female unimpregnated, because it cannot at once be felt. The examination should be frequently repeated, before a decisive opinion be given.

6. Connected with the previous sign is an *alteration in the state of the uterus*; and this is ascertained by what is called the *touch*. It is founded on the following physiological facts. After conception, the fundus and body of the uterus both increase, and thus, from its becoming heavier, it will naturally descend lower

* London Med. Gazette, vol. 13, p. 551.

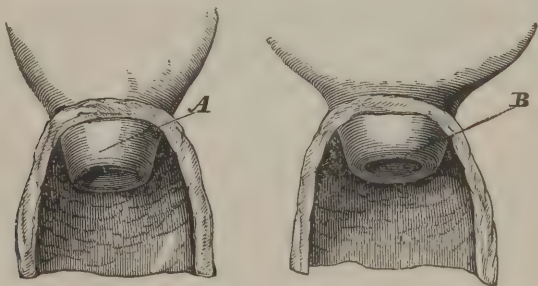
† Foderé, vol. 1, p. 446.

‡ Edinburgh Med. and Surg. Journal, vol. 6, p. 248.

§ Practical Observations on Midwifery, p. 43.

down in the pelvis, and project farther into the vagina.* The uterus remains in this situation until it becomes so large as to rise out of the pelvis; and accordingly this temporary abbreviation of the vagina, is a sign of pregnancy, though, of course, an equivocal one. The body of the uterus enlarges. The changes in the neck are also striking. In the unimpregnated state it projects into the vagina about two-thirds of an inch, (from a quarter to half an inch, *Montgomery*,) like a thick, firm and fleshy nipple, having at its termination a *transverse* opening. During pregnancy, it is felt fuller, rounder, and softer; the margins of the orifice acquire a peculiar lubricity in consequence of the increased secretion from the muciparous glands in that situation, and the orifice itself *feels* as if it were circular, because it has become more yielding.† At the termination of pregnancy, the neck is completely obliterated; the portion of uterus which lies over the top of the vagina, no longer projecting into its cavity, but forming a flat roof.

This obliteration generally commences in a first pregnancy, about the fifth month, but in females who have had several children, the neck yields more readily, and accordingly with some, it is as much altered at the fourth, as it is in the previous case at the sixth month.‡ The progressive changes will be best shown by copying the accompanying sketches from Dr. Gooch's work on the diseases of women.

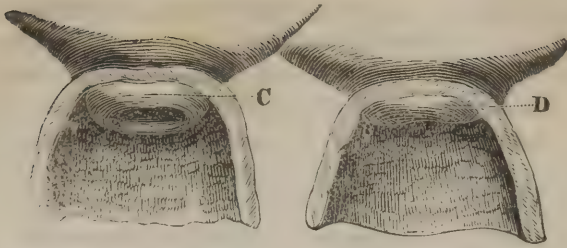


- A. The neck of the uterus before the fifth month, when it has undergone no change in its length.
 B. The neck at the sixth or seventh month, when it has begun to shorten.

* This is the common explanation, but the Reviewer of Dr. Montgomery in the *British and Foreign Med. Review*, (vol. 4, p. 454,) denies that the uterus actually descends lower into the cavity of the pelvis. "The os uteri being low in the pelvis, does not however arise from the descent of the uterus itself, but simply, as Madame La Chapelle has correctly shown, from its having increased in size and its fundus not yet having ascended out of the pelvis."

† Montgomery, *Signs of Pregnancy*, p. 100.

‡ Gooch, p. 213. Velpeau corroborates this, and states expressly that repeated ob-



C. The neck at the eighth month, when it is nearly obliterated.

D. The neck at the end of the ninth month, when it is quite obliterated.

During the period of these alterations, the vagina is more elongated, since the uterus rises farther up. But towards delivery, this viscus gradually re-descends. The os uteri also varies with the changes in the cervix. The lips gradually flatten and disappear, and towards delivery, a small rugous hole only is discoverable.*

Now with a knowledge of these facts, we may proceed to an examination, to ascertain their presence. Having evacuated the bladder and intestines, the female is laid in such a position, that the muscles of the abdomen may be in a state of relaxation. The fore and middle fingers of the right hand are then introduced into the vagina, whilst the abdomen is to be felt with the left. The patient should then be required to breathe deeply, and the examiner should press gently with his hand during expiration. If the uterus be enlarged, he will feel a hard, globular, resisting mass above the pubes. The orifice and neck should also be examined, and having hold of the uterus it may be gently moved, until motion is perceived.†

This investigation, it will be perceived, elucidates the state both of the womb and the foetus. It is certainly one of the most unequivocal modes of ascertaining pregnancy. But it requires long habit to become expert at it, and this, few practitioners will have an opportunity of obtaining. The most distinguished accoucheurs have been, and probably will continue to be deceived

servations and the most carefully conducted experiments have shown him that the changes which the cervix uteri undergoes during pregnancy, vary almost as much as its anatomical characters, in unimpregnated females. (*London Medical Quarterly Review*, vol. 3, p. 92.)

* Denman, W. Hunter, Burns. The os uteri is also found closed with a gelatinous matter.

† Fodéré, v. 1, p. 450. Smith, p. 485. Hohl in *British and Foreign Medical Review*, vol. 1, p. 108. The examination may also be made in the standing position.

with it. Of this, the works of Mauriceau and Baudelocque bear testimony, and Foderé relates a case which should make every physician distrust his skill. In a hospital where he attended, a female was detained on suspicion of being pregnant. Several medical persons visited and examined her. Some declared that she was in the eighth month of pregnancy, whilst others denied that she had ever conceived. She was kept in the hospital during a whole year, and was then dismissed as large as ever.*

It has however been asserted, since the employment of the speculum, that the occurrence of previous or present pregnancy or the contrary, may be detected through its means by an examination of the neck of the uterus. Dr. Marc D'Espine of Geneva, has published his investigations on this subject, of which the following is a brief outline.

The neck of the uterus in a healthy female who has never been pregnant has the form of a small nipple, projecting more than it is broad at the base, its colour is usually that of the vagina, and varies between the pale rose, the rose or the violet rose shade. It is never vivid in a state of health. The orifice always has the form either of a triangular or round aperture, and is constantly of very small diameter, not more than one or two lines.

There were some exceptions to this general result, since in a few, the neck was but little prominent or entirely flat.

If one or two children have been born the neck is found increased in size, and more or less flattened. The orifice is almost linear and not round, and it is dilatable. The length of the orifice is always three lines and frequently six or eight.

In those who have miscarried, an approach to the nulliparous has been observed, particularly as to the shape of the neck. The orifice would seem to become sinuous or jagged, in proportion to the number of previous labours.† How far this mode of examination will be found generally applicable or correct, remains yet to be determined.

As to the investigation already described by means of the touch, I will only add that there are some varieties in the confor-

* Foderé, vol. 1, p. 451. Capuron mentions another case in which both Corvisart and Baudelocque were mistaken. One said it was encysted dropsy with extra-uterine pregnancy, and the other that it was an enormous schirrus of the uterus, and yet in three weeks, a large and healthy child was born. (London Medical Quarterly Review, vol. 2, p. 274.)

† Dunglison's American Intelligencer, vol. 1, p. 103, from the Archives Generales de Medecine, April, 1836.

mation of parts that render this sign useless, or unavailable. The neck of the uterus is oftentimes seated very low, both in married and unmarried females, while in others, it is almost out of reach. The near approach of menstruation and the accompanying irritation of the uterus, may also, according to Dr. Montgomery, effect a change in the form and texture of the os uteri, similar to that occurring in pregnancy; this, however, is transitory. Moles and hydatids with several other affections, produce an increase in the volume of the uterus, and an examination by the touch, may give an impression very similar to that of a child contained in it. But above all, the value of it is diminished, from the fact, that it can be made with most readiness at the early stages of pregnancy, when the uterus is low down, while at the seventh month, the uterus has risen high up, and can be examined with much greater difficulty. It can thus be applied with greater certainty of success only at periods when our opinions at the best must be doubtful.

7. Several recent announcements would seem to show that we can derive satisfactory information on this subject, by an *examination of the vagina*. I shall notice them in the order in which they have presented themselves to my notice.

Dr. Kluge, Professor of Midwifery in Berlin, considers a *bluish tint of the vagina* extending from the os externum to the os uteri as a sure test of pregnancy. According to him, this discoloration commences with the fourth week of pregnancy, continues to increase to the period of delivery, and ceases with the lochia. The only condition considered as likely to vitiate this test is the existence of hæmorrhoids in a very marked degree. Dr. Sommer of Copenhagen, convinced himself of the presence of this particular colour in pregnant women, under the direction of Professor Kluge.*

Parent-Duchatelet in his remarkable work on Prostitution in the city of Paris, mentions that M. Jacquemin, had in examining the public women at the dispensary, discovered a peculiarity belonging to the pregnant state, viz. a change of colour in the lining membrane of the vagina. It becomes of a violet hue and sometimes purplish, like the lees of wine. M. Jacquemin has never

* British and Foreign Med. Review, vol. 2, p. 275.

been deceived in this, although he has had 4500 cases passing through his hands.*

Dr. Montgomery, however, in the cases examined by him, did not find this peculiar appearance always present. In some it was so slight, as to be scarcely if at all perceptible. He also suggests, that as it is evidently produced by increased vascular determination, other affections of the parts, as menstruation for example, may induce it. This he actually witnessed in one case.

Further inquiries are hence evidently necessary to ascertain the proper value of this test.

Lastly, Professor Osiander has announced a sign, to which he is inclined to attach great importance and which he calls the *vaginal pulse*. "In pregnancy, he says, the *arteria uterina* and its branch, the *arteria vaginalis*, must be necessarily increased in some, and their systole and diastole in some degree affected by the process going on in the parts which they supply. At that time he has felt the *arteria vaginalis* at the posterior border of the *columna rugarum anterior*, and has found its pulsation to be stronger and harder, and its caliber greater than usual. During imminent abortion and other morbid conditions, he has observed the vaginal pulse to be quicker than the radial."†

8. I may add in this place a brief notice of some equivocal signs, but which should not be overlooked in a medico-legal investigation. If present they assist in completing the mass of evidence.

One is drawn from the appearance of the *blood*. According to Dr. Blundell it is generally sizy during pregnancy. Dr. Montgomery, however, denies this, and it probably is far from being a constant occurrence.

The secretion from the *salivary glands* is often viscid, of a white and frothy appearance, and sometimes so much increased in quantity as to constitute salivation. Dr. Montgomery, besides his own cases, quotes Hippocrates, Gardien, Burns, and Dewees in confirmation of its occasional presence.

A chemical test has lately been announced by M. Nauche of Paris, although it is not altogether original with him. He asserts,

* De la Prostitution, vol. 1, p. 217. The author states that he has verified this test under the direction of M. Jacquemin.

† British and Foreign Med. Review, vol. 3, p. 247.

that by allowing the *urine* of pregnant women to stand for some time, there will form a white flaky pulverulent matter, being the *caseum*, or *peculiar principle of milk formed in the breasts during gestation*. In a case where the stethoscope and an examination *per vaginam* failed, he was enabled, by it, it is said, to predict the presence of pregnancy. Dr. Montgomery repeated the experiment with success in several cases; the peculiar deposit appearing as if a little milk had been thrown into the urine, and which was partly deposited and partly floating. Mr. Kane, at the request of Dr. Kennedy, made a similar examination, and found the white flocculent precipitate not only in the urine of pregnant women, but also in equal quantity from that of a female of fourteen, and a woman nursing for two months.

Mr. Pereira of London found *caseum* in the urine of women far advanced in pregnancy, but not invariably in that voided during the early months.*

9. I have until now, omitted all mention of another proof of pregnancy, which I am inclined to believe will before long be deemed the most infallible one. I allude to the results attained from the application of *AUSCULTATION* to the impregnated uterus.

Dr. Kergaradec of Paris, directed by the brilliant discoveries of Laennec, was the first who fully noticed this subject.† In a Memoir read before the Royal Academy of Medicine in 1821, and published in 1822, he developed the leading facts, and has left scarcely any thing to future observers than to verify and strengthen his references.

The indications of the presence of a living fœtus in the womb, as derived from auscultation, are two: 1. *The action of the fœtal heart*. This is marked by double pulsations, and it greatly exceeds in frequency the maternal pulse. In the first case noticed by Kergaradec, it varied from 143 to 148 in a minute, while the pulse of the mother was not more than 70. The pulsations may be perceived as early as the fifth, or between that and the sixth month. Their situation *varies with the position of the child*, and

* Lancet, N. S. vol. 8, p. 676; Kennedy, p. 57; Dr. Cummin's Lectures in London Med. Gazette, vol. 19, p. 483.

† Dr. Mayer of Geneva, stated in the *Bibliothèque Universelle*, previous to the publication of Kergaradec, that the fact of a fœtus being alive near the termination of pregnancy, might be ascertained by applying the ear to the abdomen of the mother—the pulsations of the heart being then very perceptible. (Kergaradec's Memoir, p. 36.)

accordingly they are more distinct at one time than another, in the same place, and in different places at different times. Their most general situation, however, is the lower part of the abdomen. The space over which they are perceptible at the latter period of pregnancy is about a foot long, and three or four inches broad, and their intensity of course, corresponds with the nearness of the observer to the source of the sounds. In the early months they are necessarily less manifest in each respect. The fœtal circulation does not appear to be affected, in health, by agitation in the maternal. It varies from 120 to 160 in a minute, always far exceeding, as already stated, that of the mother. The only opposite case ever noticed, was that by Dr. Ferguson, in which the fœtal heart was distinctly heard to beat only 28,* and the mother's 100. From its rareness it is possible that some peculiarity in structure may have been the cause. Dr. Kennedy, however, relates instances in which the mothers were labouring under disease; and the loss of blood either by hæmorrhage or venesection, produced striking changes in the fœtal circulation.

2. The second auscultatory sign of the presence of the fœtus has been variously termed the *placental sound*, the *placental bellows-sound* and the *utero-placental soufflet*. Considerable diversity of opinion exists as to its cause,† but it is accompanied by a rushing noise, resembling the blast of a pair of bellows. The place which it occupies is said never to change, but it varies in different individuals, and is seldom so large in extent as the space in which the fœtal heart is perceptible. The time at which it commonly begins to be heard, is the fourth month or as soon as the fundus of the uterus has risen above the upper brim of the pelvis, so that it can be brought in contact with the abdominal

* Dr. Hays, in his edition of the Select Medico-chirurgical Transactions, gives the number as in the text. Dr. Forbes, Art. *Auscultation* in Cyclopedia of Practical Medicine, mentions 20. Not having the original I cannot say who is right.

† Kergaradec considered it produced by the passage of the blood through the placental vessels; Laennec placed it in the uterine arteries; Paul Dubois in the vascular system of the tissue of the uterus generally; Kennedy in the uterine arteries, aided probably by the circulation in the maternal placenta; and a recent writer, in the enlarged uterine vessels corresponding to the portion immediately connected with the placenta. "We prefer the opinion of Bouillaud, who considers it owing to the compression of one or more of the large vessels of the abdomen, as the hypogastric and external iliac arteries, by the uterus charged with the product of conception." Bouillaud has succeeded in displacing the placental murmur by making the patient lie alternately on the right and left sides. British and Foreign Med. Review, vol. 1, p. 485. See also Ibid, vol. 1, p. 91.

parietes, by the pressure of the extremity of the stethoscope.* It is said to be even louder then, than at the full term. Certainly at later periods the sound is duller, more diffused, and no longer gives the sensation of being confined to a single artery. Dr. Ferguson observes that he has most frequently found the placental sound in either iliac region, although he has detected it in almost every part of the abdomen.

“The noise of the placenta and the action of the fœtal heart are commonly found on opposite sides of the body. This, however, is not constantly the case, for sometimes both the phenomena are audible on the same side, and in one case Laennec and Kergaradec perceived the heart’s action behind that of the placenta—the place where they were examined, being the interior part of the hypogastric region.”

In a case of twins, Laennec detected the pulsations of two fœtal hearts by the stethoscope, previous to delivery.

It must not, however, be imagined that this investigation can be made without attention, or that it is not occasionally liable to doubt. The examiner should be a person well versed in the use of the stethoscope—he should be cautious not to express a positive opinion in medico-legal cases before the fifth month has passed, and he must recollect that in some, the fœtal pulsations cannot at once be observed. In other instances sometimes hours, and even days elapse without detecting them, although they had been already noticed. This is attributed to feebleness in the child—to its removal from that side of the body over which its body rested—or to a very copious secretion of liquor amnii. This last will, at all events, render the sounds feebler. They must not be confounded with the action of the mother’s heart, which is often distinctly audible in the region of the uterus†—with intestinal motions—or with muscular contractions, produced by the pressure of the stethoscope. Dr. Ferguson suggests, that possibly, pulsations in the iliac arteries, accompanied with the bellows sound might be mistaken for the placental souffle. These, however, he adds, would only be noticed in the groin, whereas

* According to Dr. Kennedy, (p. 80, 82,) he distinctly detected it in the tenth, eleventh and twelfth week. Drs. Montgomery and Velpeau have never succeeded until four months of pregnancy had been completed.

† In such cases, Dr. Kennedy found the sound to become more audible as it was traced from the fundus to the uterus into the maternal cardiac region, and the beats correspond with the mother’s pulse. (p. 116.)

the noise of the placenta will be heard over a space of some inches in extent. Again, if the placenta be attached to the posterior part of the uterus, especially towards its neck, the thrill may be beyond the reach of the instrument.

The examination may be made either in the standing, sitting, or horizontal position. The two last, are, however, preferred. It has the advantage, that it can be used without removing the ordinary dress. Every thing in the shape of stays or corsets should, however, be previously put aside.

It is impossible to peruse the cases of Kergaradec, Laennec, Ferguson, Kennedy, Elliotson and Dr. John D. Fisher, of Boston, without attaching much faith to these combined signs. In many instances, the female strenuously and indignantly denied the possibility of pregnancy. The fœtal and placental actions were, however, present; and in a few months the presence of labour satisfied every doubt. Kergaradec examined a female near her time, the simple souffle was very manifest, but no double pulsation could be discovered. In a few days a fœtus far advanced in putrefaction was born. May we not conclude with Dr. Forbes, that although the absence of these signs is not an absolute test of the non-existence of pregnancy, yet their presence is almost infallible.* They do not accompany any other known state or condition of the abdominal organs.†

* There is one circumstance, which it is necessary to remember when making an examination *during labour*. It is asserted by Dr. Hamilton, and confirmed by the observations of Dr. Moir and Mr. Syder, that the number of fœtal pulsations diminish greatly (sometimes from 120 to between 60 and 70) whenever uterine contraction supervened and again increased, when the contraction is over. Dr. Cummin suggests whether this change is not owing to some preparation of the fœtus for the respiratory process. Lectures in London Med. Gazette, vol. 19, p. 439.

† The following authorities deserve perusal:—The original Memoir of Kergaradec, Paris, 1822. American edition of Laennec, 1830, Appendix. Cyclopedia of Practical Medicine, Art. *Auscultation*, by Dr. Forbes. Dr. Ferguson on Auscultation as the only unequivocal evidence of pregnancy. (Dublin Med. Transactions,) in Select Medico-Chirurgical Transactions, vol. 1, p. 172. Dr. Kennedy on the Placental Soufflet. (Dub. Hosp. Reports, vol. 5,) in *Ibid*, p. 189. Dr. Adams on Auscultation in Difficult Labour, from Dublin Medical Journal. (Boston Medical and Surgical Journal, vol. 8, p. 277.) Dr. Montgomery in Cyclopedia of Practical Medicine. Medico-Chirurgical Review, vol. 9, p. 607; vol. 21, p. 163. A case is given where the pulsations (supposed to be fœtal) were only 128 in a minute. Deeming these too few, the pulse of the mother was examined, and found to be the same. No other sounds could be detected, and the female (as the event proved) was declared not pregnant. Dr. John D. Fisher in Boston Medical and Surgical Journal, vol. 3, p. 97. Mr. Probart in London Medical Repository, April, 1828. Dr. Elliotson in Lancet, N. S. vol. 7, p. 656. A supposed case of dropsy, shown to be pregnancy by the stethoscope. Dr. Nagele, cases of twins. (Lancet, N. S. vol. 7, p. 232.) This author denies that the placental sound is a safe test of the presence of pregnancy. He states that he has met with it when no placenta was present. Dr.

The lengthened review that has been taken of the signs of pregnancy, sufficiently indicates the difficulty that attends the subject. I will not say, as in a previous edition, that there is *no invariable sign of pregnancy*; but I will repeat the caution there given, that the medical witness is called upon to prove its existence on oath. He is, accordingly, bound to weigh all the *possible causes* that may produce these symptoms, and he is to recollect that most of them have proved equivocal.* Even the last and the best will require frequent practice to enable the physician to speak with certainty. The female also, in most of the cases, conceals her knowledge of symptoms. It is evident, therefore, that nothing can be lost, but much may be gained by delay—that the examinations should be frequently repeated, and that an opinion should seldom be hazarded before the end of the sixth month. When it is recollected that he may have the life of a fellow-being, or her property at his disposal, surely he will not desire to be in haste on so important a subject.† At the period

M'Keever on the information afforded by the stethoscope in detecting the presence of fœtal life. *Lancet*, N. S. vol. 12, p. 715. Review of Dr. Hohl on Obstetric Auscultation in *London Med. Quarterly Review*, vol. 2, p. 83, and in *British and Foreign Med. Review*, vol. 1, p. 85. Dr. Robert Collins' *Treatise on Midwifery*. And last, but among the most important, Dr. Kennedy's separate work on obstetric Auscultation. For some facts tending to weaken our confidence in this mode of examination, see Dr. Maunsell in *Edinburgh Med. and Surg. Journal*, vol. 40, p. 302. It would also seem that Velpeau does not agree in considering the *souffle* as peculiar to pregnancy; "as it has been heard in cases where the uterus contained a simple tumour, or even where the ovary was the diseased part." (*Lancet*, N. S. vol. 14, p. 246.) Capuron is also a disbeliever in auscultation.

* Mary Heath was tried before the court of king's bench in Ireland, for perjury in the great Annesley cause. The object of this cause was to ascertain whether James Annesley was the son of Lord Altham. On the trial of Mary Heath, Dr. Samuel Jemmat, an aged and respectable practitioner, testified that he had formerly been consulted by Lady Altham, and found her with child. She had all the usual symptoms. One of the counsel asked him, "Upon your oath, sir, are there any rules in your profession, by which a pregnancy can be discerned from a tympany, or any other like disorder? *Answer*. By virtue of my oath, *that question would puzzle not only the colleges of physicians of England and Ireland, but the Royal Society too*. *Jury*. Is there such a thing as a false conception? *A*. Very often; a mola, there is. *Q*. Are the symptoms the same? Have women grown big with a false conception? *A*. They have done it." (*Hargrave's State Trials*, vol. 9, p. 463.)

"Concludamus ergo, ex prædictis; quod certa pregnantiae cognitio ex nullis signis indubitato haberi potest, sed bene conjecturalis ac dubia; nullum enim signum tam proprium pregnantiae habemus, quod ex aliqua præternaturali causa originem haberi non possit." (*Zacchias*, vol. 1, p. 90.)

"Toute notre sagacité, mise en œuvre, ne peut nous fournir aucun signe invariable qui déterminé l'existence du fœtus dans la matrice." (*Mahon*, vol. 1, p. 141.)

"The verification of the pregnant state cannot depend on the importance due to any *particular sign*: It must depend on the existence of several." (*Smith*, p. 484.) See, also, *Foderé*, vol. 1, p. 433. *Capuron*, p. 81.

† Cases are said to be mentioned by various writers, as *Ambrose Paré*, *Mauriceau*

mentioned, however, he may venture to give a nearly decisive opinion, if it be founded on the presence of most of the leading signs that have been enumerated.

A few remarks are here necessary with respect to *extra-uterine pregnancy*. The early symptoms of it are generally the same as in common gestation—the abdomen and uterus enlarge, the menses are suppressed, the breasts increase in size, and very often the child quickens at the proper time, but is more felt on one side than the other. The distention is also unequal, not occupying the front of the abdomen as in true pregnancy, but inclining either to the left or right. Severe pain, owing to the violent and preternatural distention of the narrow parts in which the ovum is confined, is also a common attendant. The body of the uterus enlarges often in particular parts, and sometimes throughout its extent; but I do not find alterations in the cervix particularly noticed. At the end of eight, nine, or ten months of gestation, appearances of labour come on, and continue for a longer or shorter period of time; the motions of the child cease, and milk is secreted. The case terminates sometimes in death, from the irritation produced; sometimes the fœtus is voided by the natural passages, while it again will remain in the abdomen for years without affecting the health.*

See, where female criminals have been executed on the decision of examiners, that pregnancy was not present; and notwithstanding a fœtus has been found after death. The following, from Deveaux, is a melancholy example: In November, 1655, in France, several midwives examined a female under sentence of death, and deposed that no sign of pregnancy was present. She was executed; but on dissection, a fœtus of the third or fourth month was discovered. The midwives were severely admonished by the magistrates; and it was decided, that whenever a female declared herself pregnant, her punishment should be delayed for a sufficient length of time to determine the certainty of the fact. (Foderé, vol. 2, p. 444.)

* A very full collection of references to cases of extra-uterine pregnancy will be found in the Notes to Burns's Midwifery. See also the Philosophical Transactions, passim; and Foderé, vol. 1, p. 453. Prof. James on Extra-Uterine Pregnancy, in the North American Medical and Surgical Journal, vol. 4, p. 277. Dr. Ramsbotham in Medico-Chirurgical Review, vol. 21, p. 310. A very remarkable case of pregnancy succeeding to an extra-uterine case? and in which the latter was some years after discharged by an opening at the umbilicus, is given by Dr. Montgomery, Cyclopædia of Practical Medicine, vol. 3, p. 492.

Dr. Ramsbotham mentions a case in his own, and father's practice, where three children were successively born of a female, in whom an extra-uterine fœtus was unquestionably present. He refers to similar cases recorded in the Medico-Chirurgical Review, vol. 24, p. 163 (at Dublin.) Ibid, vol. 24, p. 239 (at Geneva.) "It is a curious circumstance, in the history of these cases, that if the child should live till the time of gestation is completed; as soon as that time has expired, the uterus takes on itself expulsive action, which is attended with pain similar to the throes of labour, and during these pains the deciduous membrane is expelled from the cavity with a slight sanguineous discharge, and the same occurs on the death of the ovum,

Should the physician, as a medical jurist, suspect the presence of a case of this kind, he can do nothing more than desire a delay until the supposed termination of the gestation. The proofs are not so infallible, but that a foetus in utero may possibly be present.

The most difficult case of concealed pregnancy that probably can occur, is when it is accompanied with ascites. The motion of the foetus cannot be perceived; and it is also added by Foderé, that the uterus does not take on its ordinary development. Yet many cases are on record, where females, with this disease on them, have been delivered of healthy children. In suspected cases, the practitioner should weigh the symptoms, and ascertain whether they are all referable to the disease; his medicines should be mild, and patience practised as to the event. In many cases, the difficulty may be solved by the application of the stethoscope.*

In the sketch now given of the signs of real pregnancy, most of the remarks are directly applicable to concealed or pretended cases. With respect to the latter, I may observe, that in addition to the circumstances already enumerated, the following should also be noticed:

1. *The age of the individual.* It is generally conceded that no female can be impregnated, in our own climate, under the age of thirteen, nor above that of fifty, provided she has been previously barren. This, however, is only to be taken as a general rule, subject to exceptions.† The presence of menstua-

provided that be premature." Lectures. London Med. Gazette, vol. 16, p. 214. See also a case by Dr. S. W. Williams, of Massachusetts, in which death succeeded a week after the birth of a healthy child. On dissection, the parts of a foetus were found in the left ovary. Boston Med. and Surg. Journal, vol. 18, p. 28.

* There are many cases on record of pregnancy complicated with ascites. A Memoir of Scarpa in Quarterly Journal of Foreign Medicine and Surgery, vol. 1, p. 249; He operated with success, and twins were subsequently safely delivered; they died, however, soon after. See Medico-Chirurgical Review, vol. 5, p. 500; vol. 6 p. 265, 506; vol. 10, p. 234, 270. Edinburgh Medical Essays, vol. 6, p. 137. Langstaff in Medico-Chirurgical Transactions, vol. 12. North American Medical and Surgical Journal, vol. 4, p. 190. Lancet, N. S. vol. 9, p. 117.—In most of these, the operation for paracentesis was performed, and living children born; they did not, however, usually survive any time.

† Many cases of births in advanced age are on record. (See Capuron, p. 93 and 98.) The succession to an estate was disputed in France, because the mother was fifty-eight years old when the child was born. It was decided in favour of the applicant, because similar instances are mentioned by ancient and modern writers. Smith, p. 493, mentions cases of early and late fecundity. I quote the following, because it happened lately: "May, 1816, Mrs. Ashley, wife of John Ashley, grazier, of Firsby near Spilsby, at the age of 64, was delivered of two female children,

tion, in every country, constitutes the state of puberty; and the irregularity of its occurrence is noticed by most practitioners. It is to be regretted, however, that so few have given the result of their observations. Out of 450 cases investigated at the Manchester Lying-in-Hospital in England, the following results were obtained:

The menstruation began			
in the eleventh year, in 10		sixteenth,	76
twelfth, 19		seventeenth, . . .	57
thirteenth, 53		eighteenth, . . .	26
fourteenth, 85		nineteenth, . . .	23
fifteenth, 97		twentieth,	4

Again, out of 10,000 pregnant females registered at the same hospital, 436 were upwards of 40 years of age;

397 from 40 to 46;	
13 in their 47th year;	
8	48
6	49
9	50
1	52
1	53
1	54.

Mr. Robertson also adds, that so far as he could ascertain, and particularly in the three cases above fifty years, the catamenia continued up to the period of conception.*

which, with the mother, were likely to do well." (Edinburgh Annual Register, vol. 9, part 2, p. 508.)

And the following is an American case. A woman at Whitehall, (State of New York,) named Ann Cook, had a child at the age of 64. She had not menstruated for fifteen years, and her youngest child is twenty-six years old. The child was born in February, 1836, and was doing well. (Boston Med. and Surg. Journal, vol. 14, p. 79.)

For several instances of menstruation at advanced periods of life, (between 70 and 87 years of age,) I refer to Mr. Semple's paper in the Lond. Med. Gaz. vol. 15, p. 467.

* See Mr. Robertson's papers on the natural history of the menstrual function, in Edinburgh Medical and Surgical Journal, vol. 38, p. 227; and also on the period of puberty, in North of England Medical and Surgical Journal, p. 69. Mr. Robertson endeavours to combat the prevailing idea that climate has an effect on the period of puberty. His historical testimony goes to show that it sometimes is as early in northern as in southern countries; and if any general cause is to be assigned for precocity, certainly the one suggested by him, of early licentiousness, or even connexion, is the most probable. Mr. R. mentions the case of a girl who worked in a cotton factory, becoming pregnant in her eleventh year. When in labour, she was seized with convulsions; but ultimately, without unusual difficulty, was delivered of a full-grown child, still born. The fact was perfectly ascertained by a reference to the church register, that at the time of her delivery, she was only a few months advanced in her twelfth year. She menstruated before she became pregnant.

"In the statement sent to parliament by Bartholomew Mosse, when endeavouring to procure a grant for the Dublin Lying-in-Hospital, he mentions that eighty-four of the women delivered under his care were between the ages of forty-one and fifty-four; four of these were in their fifty-first year, and one in her fifty-fourth."*

Osiander noticed at Gottingen, out of 137 females, that 9 menstruated at 12, 8 at 13, 21 at 14, 32 at 15, 24 at 16, 11 at 17, 18 at 18, 10 at 19, 8 at 20, 1 at 21, and 1 at 24. At Paris, according to Velpeau, the function occasionally commences at 10, 11 or 12 years; but generally between 12 and 16.†

Professor Hohl of Halle out of 195 cases, found that

3 menstruated at	-	-	-	-	12 years.
10	"	-	-	-	13 "
27	"	-	-	-	14 "
33	"	-	-	-	15 "
41	"	-	-	-	16 "

There are, however, some facts contradicting the opinion of Dr. Robertson, as in the following :

"The author has known the instance of an European child who went to the East Indies at the age of six, in whom menstruation took place at the ninth year, and continued to occur regularly during three months; but the child ther. returning to a more temperate climate, the secretion ceased, and has not yet returned. The child is now twelve." (C. M. Clarke, part 1, p. 12.)

"Heat, whether natural or artificial, seems to produce sexual maturity in the animal body, in a way perhaps analogous to that which it performs on the same principle in the vegetable kingdom. Bruce mentions, that in Abyssinia, he has frequently seen mothers of eleven years of age. In Bengal, I have seen many girls come to the age of puberty at that period, and sometimes a mother under the age of twelve. I formed an opinion, though perhaps I had not a sufficient number of facts to bear me out in it, that precocious pubescence was to be found more frequently among an unfortunate class of females, who are sold when very young by their parents, for the purpose of prostitution, and who being brought up in the stews, their passions are daily excited by voluptuous and licentious scenes. In Manchester and Glasgow, the girls who work in the cotton mills, which are of necessity kept at a high temperature, and where morality is not at a much higher pitch than in a Rhindy Ghurr in India, the same effect obtains." DUNLOP.

See also Davis's *Obstetric Medicine*, p. 226, &c. Dewees (*Hays' Cyclopedia of Practical Medicine*, vol. 1, p. 344,) denies the correctness of Mr. Robertson's opinion, from his own observations on this continent; and there certainly cannot be a better field for examination. Dr. Ramsbotham also, I observe (*London Medical Gazette*, vol. 13, p. 269,) in his lectures, doubts it.

Among extraordinary cases connected with the history of menstruation, I may refer to one occurring in Italy, where the function continued from the fifty-third to the ninety-fourth year, without injury to health. (*American Journal of Medical Sciences*, vol. 7, p. 513.)

* *Cyclopedia of Practical Medicine*, vol. 3, p. 491. Dr. Montgomery adds a case, on the authority of Dr. Labbat of Dublin, of a female marrying at forty, and conceiving and bringing forth a living child for the first time when past the age of fifty.

† Velpeau's *Midwifery*, p. 84. Osiander's numbers amount to 143, and it is hence possible that there may be some misprint.

28	menstruated at	-	-	-	17 years.
21	"	-	-	-	18 "
11	"	-	-	-	19 "
12	"	-	-	-	20 "
5	"	-	-	-	21 "
2	"	-	-	-	22 "
1	"	-	-	-	23 "
1	"	-	-	-	24 "

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The menses returned in

5	cases	-	-	-	every 14 days.
43	"	-	-	-	" 3 weeks.
138	"	-	-	-	" 4 "
1	"	-	-	-	" 6 "
2	"	-	-	-	from 2 to 4 "
2	"	-	-	-	" 3 to 4 "
1	"	-	-	-	" 4 to 12 "
1	"	-	-	-	" 4 to 18 "
1	"	-	-	-	" 6 to 10 "
1	"	-	-	-	" 8 to 12 "

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Although impregnation is supposed to depend on menstruation, yet there are cases on record, where females have become pregnant without ever menstruating. Sir E. Home, in the *Philosophical Transactions* of 1817, mentions the case of a young woman who married before she was seventeen, and although she had never menstruated, became pregnant. Four months after her delivery, she became pregnant a second time; and four months after the second delivery, she was a third time pregnant, but miscarried. After this, she menstruated for the first time, and continued to do so for several periods, and again became pregnant.†

* *British and Foreign Medical Review*, vol. 1, p. 103.

† See Foderé, 1, p. 396; Capuron, p. 96, for similar cases. Also Moseley on *Tropical Diseases*, p. 103, 104. "Ego habui amicam laudabilis temperamenti et complexionis, quæ octo filios tulit consequenter, id est, omni anno unum, nunquam tamen visa una gutta sanguinis menstrui." (Low, p. 523.)—*Impregnatio nullis unquam præviis menstruis.* (Stalpart, vol. 2, obs. 31.)

"I knew a noble virgin, who being married before her menses, which had been expected for many years, appeared, was nevertheless, very fruitful, and that we may

2. We should ascertain whether any of the causes of sterility, as already enumerated, be present.

3. Women often fancy themselves pregnant when the menses cease. This great change in the system often produces enlargement of the abdomen, nausea, and the breasts fill with a milky fluid. Caution is necessary in such cases, in giving a decided opinion; and Van Sweiten mentions two, which teach a valuable lesson. A female had a son when she was twenty-five years of age; twenty years after, she declared herself pregnant a second time. This was disbelieved by all, but it was verified in due season. Again, a female had been delivered of fourteen children, and might hence be supposed to be well acquainted with the signs of pregnancy. After the birth of the last child, the menses ceased for eight years; and at the end of this time, she supposed herself again pregnant; but a few months reduced her size, and showed that she was mistaken. A torpid state of the uterus, combined with intestinal flatulence, appears to be the principal cause of these sensations. "At this time, (says Dr. Gooch,) menstruation will often cease for several months, and the abdomen become distended with a flatulent tumour; the air moving about the bowels gives an inward sensation, which is mistaken for the child; there is often slight nausea, various nervous feelings and an anxiety to believe in pregnancy as a test of youth-

be the less surprised thereat, the very same thing had likewise happened to *her mother*." (Morgagni, Epistle 47.) Velpeau also mentions a case at Tours. Additional cases are quoted in Cyclopaedia of Practical Medicine, Art. *Pregnancy*, by Dr. Montgomery.

Dr. Dewees denies that impregnation can take place without menstruation, (p. 59.) He attributes the rare cases noticed to some imperfection of the genital organs. The discharge may also in some instances have been colourless.

Cases of the absence of menstruation for several years previous to pregnancy, are given by Professor James of Philadelphia. (Hosack's Medical and Philosophical Register, vol. 4, p. 222; by Dr. Hosack, Eclectic Repertory, vol. 2, p. 119; by Dr. Meriman in Medico-Chirurgical Transactions, vol. 13, p. 347; by Dr. Campbell, Midwifery, p. 49. He is acquainted with a female to whom eight children have been born, at the full time, "without having any monthly indisposition between any of the births."

By Mr. Reid of London, who mentions the case of a female, who "during the period of nine years, that she had been married, had never seen the catamenia, until she became pregnant with this last child, after which, up to the term of quickening, they appeared regularly every month." She had several children previous to the one whose delivery forms the subject of Mr. Reid's communication. London Med. Gazette, vol. 16, p. 144.

By Dr. Montgomery, (Signs of Pregnancy, p. 43,) a female labouring under disease of the heart, which had induced dropsy, had had no menstrual discharge for *two years previous* to conception. Her pregnancy was not even suspected till she miscarried of a fœtus of five months.

fulness. About this age, also, the omentum and parietes of the abdomen often grow very fat, forming what Dr. Baillie once called "a double chin in the belly." This assemblage of symptoms at this age frequently leads to the supposition of pregnancy.* The case of Joanna Southcott is sufficient to show the delusions that have happened, and undoubtedly will again happen.†

4. There are various substances or fluids formed in the uterus, which cause the female to imagine that she is in this state. Of this description are moles and hydatids. The term *mole* does not appear to be very accurately defined. I shall understand by it, a fleshy substance contained within the cavity of the uterus—enveloped in a membrane, and generally filled with blood, although occasionally dry. On cutting into it, various parts, resembling an imperfect fœtus, will be observed. The symptoms produced, are at first very similar to those of pregnancy. The stomach is affected, and the breasts and belly enlarge. The latter, however, increases much faster, and is softer and more variable in size than in real pregnancy. It is sometimes as large at the second month, as in the fifth of perfect conception. The duration of this is uncertain; but the mole generally comes away at the third or fourth month, although in some cases it has not been evacuated until the sixth or seventh, and it is even said to have been retained for years.‡

This term has also been applied to those coagula, which not unfrequently accompany the process of menstruation, and which appear to have remained so long in the uterus, as to have re-

* Gooch's Diseases of Women, p. 226. He adds, that he has met with similar cases in young women, owing probably to obstructed menstruation, but aggravated by mental agitation.

† "In such instances, the greater number of the rational signs must be considered as entitled to little or no consideration, if not altogether disregarded, and our reliance should be placed on careful manual examination, by which the abdomen however enlarged, is found soft, puffy and compressible, the umbilicus sunk, no abdominal tumour, and the uterus per vaginam unaltered."

Dr. Montgomery however from whom I have just quoted, advises, that we should not deny the existence of pregnancy, but treat the case for a time as if the female were pregnant, and at the same time, exhibit such medicines, as will improve the general condition of the system.

‡ A case examined before the Parliament of Paris, in 1781, in which the female sued for damages for seduction. Twenty months after this was alleged to have been committed, she brought forth a mole. The parliament very properly decided against her, on the score of character; but they added, what may be questioned under the present acceptation of the term, *that unmarried females, and even nuns have discharged moles, without any previous criminal connexion.* (Foderé, p. 1, 477.)

tained the fibrous part of the blood only. Many unmarried females discharge these, and they should be accurately distinguished from the former. The one is to be deemed the product of conception,* and the other not. And these bloody coagula are

* "True moles are distinguished from the false, and other growths of the uterus, by their not deriving their origin from the substance of the womb, or its membrane; but by their being always the consequence of conception." (Voigtel's Pathological Anatomy in Edinburgh Medical and Surgical Journal, vol. 11, p. 99.)—"It is the opinion of many, that these substances are never formed in the virgin state, and no case that I have yet met with contradicts the supposition." (Burns, p. 79.)

Madame Boivin divides all the species into three classes. 1. The false germ or blighted ovum. 2. The fleshy mole. 3. The vesicular mole (hydatids.) Of fleshy moles, two kinds are described—one hollow in the centre, the other solid, in both cases a degeneration of the envelopes of the fœtus. (Edinburgh Medical and Surgical Journal, vol. 39, p. 217.)

Moles are of three kinds. 1. A fœtus so vicious in formation and imperfect in development, that it in no degree resembles a human being, but is an organized, though shapeless mass of flesh. 2. The false germ of Madame Boivin, the membranes appear perfectly formed, but the embryo is wanting. 3. The embryo has died early, but the ovum has been retained and increased in size and solidity. "I presume that each of the three kinds I have specified is always the result of sexual intercourse." Dr. F. H. Ramsbotham. London Med. Gazette, vol. 16, p. 609.

Fleshy moles. "Though these substances are invariably the result of conception, it is not certain that they are formed by the growth of the membranes subsequent to the death and expulsion of the embryo. In several cases of this description, no embryo was at any time discharged." (Cyclopedia of Practical Medicine, Art. *Abortion*, by Dr. Robert Lee.)

"Le developpement des masses d'hydatides (says Desormeaux) est le plus souvent, sinon toujours, la suite de la conception." (Orfila, Leçons, second edition, vol. 2, p. 220.) He says that Velpeau entertains a similar opinion. Candour, however, obliges me to add, that some observers believe that they may occur in chaste females. (Smith, p. 298.)

Dr. Blundell thinks, that fleshy substances are formed in the uterus of pure females, which resemble in structure the placental part of the ovum in the earlier months.—"To my knowledge, they form month after month in unmarried females of undoubted honour." In some instances, however, he allows that they are blighted ova, the result of intercourse. (Lancet, N. S. vol. 4, p. 225.)

Murat, Art. *Grossesse*, (Dictionnaire des Sciences Medicales,) appears undecided; while in Art. *Mole*, he advocates the prevailing idea.

The true distinction is, however, undoubtedly taken by Mahon, (vol. 1, p. 274.) "The existence of moles, properly so called, (says he,) is extremely doubtful, since they may all be referred to some one or other of the substances of which we have spoken, viz. a placenta which had continued its growth, the fœtus having perished; the degenerated remains of the after birth; coagulated blood; sarcomatous tumours or polypi of the uterus. The two first cannot exist, except after sexual intercourse; the other three may be found independently of it."

With Dr. Montgomery, to whom I am indebted for the reference, I entirely concur in this view, and add in his words, that no medical jurist would be justifiable in pronouncing any such mass expelled from the uterus, a proof of pregnancy, except he can detect in it either the fœtus or a part of it, or some other of the component parts of the ovum. But it must also be recollected, that in many of these cases, no trace of a fœtus can be discovered, it having been completely destroyed, and only its membranes and the placenta continuing to grow for some time, and becoming thickened and fleshy or filled with fluid.

Dr. Granville proposes a distinction in his work on Abortion in the following words: "What then is the distinction between a real mole and a coagulum, no matter of what species or variety the latter be? It is this: that the former has invariably a central cavity, wholly enclosed, *without any opening or aperture*; whereas

wanting in the characteristics of a true mole, viz: the fleshy texture, and the enveloping membrane.

We have already remarked, that a true mole may be mistaken for real pregnancy during some months. By, however, attending to the following circumstances, the difficulty may in some degree be solved. The early and rapid increase in size of the uterus—the sensation of pressure, which often produces pain, and the want of motion when examining the uterus. This last, however, is seldom applicable, since the investigation is usually made in the early stages. Foderé adds, that the breasts are not filled with a milky, but with serous fluid, and that the female often experiences violent convulsive motion in her abdomen.* Occasional discharges of blood *per vaginam* during the gestation of the mole. are not uncommon.

Hydatids, or *dropsy of the uterus*, which by many are considered as synonymous,† are generally supposed to proceed from

the latter, let it be formed in any way you please, stratified, laminated, concentric, membranaceous, solid, hollow, or with a regular cavity lined with a membrane, no matter—will be found invariably to have at one of its extremities, an *aperture*, either leading straight into the inner cavity, where such an one exists, or simply passing from one membrane or stratum of coagulated blood to the next, until it reaches the innermost, which is also perforated like the rest. This is a striking and important distinction, and I am not aware that it has been noticed or made public by any author before me.” p. 50.

* Foderé, vol. 1, p. 469.

† See Denman, p. 148, and the opinions of Drs. Baillie and Sprengel there quoted in favour of this belief. Dr. James, Professor of Midwifery in the University of Pennsylvania has advocated a similar opinion. (Eclectic Repertory, vol. 1, p. 499.) See also Cyclopaedia of Practical Medicine, Art. *Hydatids*, by Dr. Kerr, vol. 2, p. 449.

“It is more than probable, that the cases described as dropsy of the uterus, have belonged to the class of hydatids; or if there be any such disease in fact as dropsy of the uterus, the author never has met with a case of it.” (C. M. Clarke, part 2, p. 126.) Dr. Ramsbotham concurs in opinion with Sir Charles Clarke, and says he has never met with a case. (London Med. Gazette, vol. 16, p. 614.)

John Burns, however, considers them as distinct diseases, and the remarkable case of Dr. A. T. Thomson, (Medico-Chirurg. Transactions, vol. 13. p. 170,) shows that hydrometra may exist independent of hydatids; so also in the case examined by Mr. Coley. (Transactions Provincial Med. and Surg. Association, vol. 4, p. 357.) There is certainly one condition that is undoubtedly distinct from what we understand by *hydatids*. It consists in an enormous collection of the liquor amnii, to the amount sometimes of three or four gallons. Here a fluctuation may be felt, as if the female were dropsical, and unless aware of the possibility of its occurrence, the operation might be rashly hazarded. Dr. Blundell suggests as a discriminating circumstance, that the enlargement here is often very sudden. Its real nature, however, must be ascertained by an examination of the parts.

Dr. Haighton was sent for, to a case where, in the middle months of gestation, a female laboured under great swelling of the abdomen, which fluctuated distinctly. The surgeon associated with him proposed an operation. It was delayed, and during the night “the membranes which contained all this water burst of themselves, a flood of fluid was discharged, the abdomen rapidly collapsed, a fœtus issued not larger than the first joint of the finger, and the patient did well.” Blundell’s Lectures, Lancet, N. S. vol. 3, p. 98.

coagula of blood, or from portions of the placenta, degenerated during the process of pregnancy.* There is, however, an opinion

Cases resembling the above, are related by Mr. Wildsmith, of Leeds; *Lancet*, N. S. vol. 4, p. 740; by Mr. Ingleby, in his work on Uterine Hæmorrhage; *Medico-Chir. Review*, vol. 21, p. 218; by Dr. Ramsbotham, in his *Observations on Midwifery*; *Ibid.* p. 312-314; by Mr. Fell, in *Edin. Phys. and Literary Essays*, vol. 2, p. 374.

* "As in other parts of the body we find hydatids without there having been a connexion between the sexes, so in the uterus, I presume they may be formed without intercourse; *but in general, they are the result of impregnation.*" (Blundell, *Lancet*, vol. 4, p. 226.) It is probable that the existence of pregnancy is not necessary for the production of the disease. (C. M. Clarke, part 2, p. 115.) Dewees (*Diseases of Females*, p. 298,) is of the same opinion.

Madame Boivin, however, in her *Essay on the Vesicular Mole*, opposes the idea of its consisting of hydatids, and deems it a degeneration of the impregnated ovum. In proof of this, she refers to the mass of vesicles being enveloped in a membranous sac, consisting of two layers, one resembling the decidua reflexa, and the other the amnios. Of course, she considers it invariably the result of sexual intercourse. (See her "*Nouvelles Recherches*," &c. and *Edinburgh Med. and Surg. Jour.* vol. 34, p. 382.) To the question put in a former edition, *Whether there was any case in which an examination had been made on the virgin female labouring under this disease; and if so whether the parietes of the uterus enlarged as in real pregnancy?* Madame Boivin at least gives an unequivocal answer: "En effet, il nous paraît toujours très difficile de déterminer d'une manière absolue l'état de virginité d'une fille, cloîtrée ou non, chez laquelle s'est développée l'utérus comme dans une grossesse fœtale de neuf mois." Not only the uterus, but all the organs sympathizing with it, develop themselves; and whatever may have been the antecedent circumstances of the individual, these combined, say little in favour of her chastity. (*Recherches*, p. 20.)

Velpeau, in his recent work observes, as the result of his numerous examinations, that "les hydatides en grappe de l'utérus n'étaient pas de vers vésiculaires, comme on croit généralement; mais bien le produit d'un œuf avorté, dont les petits corps gangliiformes ont pris un accroissement qui ne leur est pas ordinaire." (*Embryologie*, p. 10.)

To this testimony, I add the decided opinion of Dr. Montgomery, who, after quoting Baudelocque, Voigtel, Desormeaux, Velpeau, and Madame Boivin to the same effect, remarks, "Our own belief is, that uterine hydatids do not occur except after sexual intercourse, and as a consequence of impregnation. We never met or heard of a case in which their presence was not accompanied or preceded by the usual symptoms of pregnancy; and in every instance under our immediate observation, the women supposed themselves with child; and when the contents of the uterus were expelled, there was found either a blighted fœtus, or some other part of the ovum." To the argument from analogy, and which may be seen above in the observations of Dr. Blundell, he replies, that the hydatids in the respective cases greatly differ; and above all, that they are always formed in connexion with serous membranes, which do not exist in the uterus until the ovum is deposited there, whose membranes are essentially serous.

At a later period however, than any of the above writers, Dr. F. H. Ramsbotham has published the following remarks. "It is the opinion of Madame Boivin, and some able physiologists, that these bodies cannot be formed independently of pregnancy, while others, with Percy, hold a different doctrine. I am myself inclined to the belief, that they may be formed in the virgin uterus, and think the membranous substance secreted in one variety of dysmenorrhœa, very likely to lay the foundation of the disease. This fact, indeed, seems proved by cases lately reported in the *Glasgow Medical Journal*, by Dr. Andrew. Two out of four instances of uterine hydatids, which he there records, happened in the persons of young unmarried girls, of respectable character, aged sixteen and seventeen, and in one, there was present a perfect hymen." *Lectures*, London Med. Gazette, vol. 16, p. 613.

In the first number of Cruveilhier's *Pathological Anatomy*, are two plates illustrative of this disease, which strikingly elucidate its nature. The female had hæmor-

entertained by some writers, that they are occasionally an original production of the uterus. It is not necessary to proceed to a minute description of them; but we may observe, that usually these watery vesicles hang together in clusters, occupy a considerable space, and produce a corresponding distention. Their early symptoms are those of pregnancy.* The uterus enlarges—the breasts swell—milk is occasionally formed—sometimes there is an alternate discharge of serous fluid and blood from the vagina. Dr. C. M. Clarke considers the occasional and sudden discharge of an almost colourless and inodorous watery fluid as a diagnostic symptom, while Madame Boivin relies much on the want of the signs of a fluid in the uterus, or of a solid body floating in a fluid, when the patient is examined by the touch. At the accustomed time no motion is felt. There is no certain time for their discharge. Sometimes, however, they do not come away, until some period after real pregnancy would have been accomplished. Their expulsion is attended with pain, often of the severest kind, and generally with hæmorrhage.† An instructive case is related by Dr. Eights, where the female conceived herself pregnant, but felt no motion, and at the end of eight months, was seized with pain, and occasional watery discharges. This continued some time, and then ceased. A month after, she was attacked with labour pains, and discharged about a gallon of hydatids. On the third day after this, there was a copious secretion of milk.‡ Mauriceau also states the case of the wife of Presi-

rhagic discharges, with pain, at the fourth month, which continued at irregular intervals until the seventh, when the placenta, transformed partly into a mass of hydatids, was discharged with severe pain. A fœtus of the size of the *fifth or sixth week*, was found by cutting into the chorion.

* Clarke, part 2, p. 118. Edinburgh Medical and Surgical Journal, vol. 34, p. 482. Davis's Obstetric Medicine, p. 677. This author is also very decided in his opinion. "They are generally the accompaniments, as also probably the results, of blighted and other diseased forms of eventually unproductive gestations; or if we admit the fact of their being ever produced independently of any connexion with a contemporaneous gestation, the author feels disposed to the opinion that they must be the results of conceptions of antecedent dates."

† Mr. Watson (Philosophical Transactions, vol. 41, p. 711,) relates a case of this description, in a female forty-eight years old. There was no enlargement of the abdomen or of the breasts; and she attributed her symptoms to a cessation of the menses. The hydatids were united, like a cluster of grapes, to a spongy substance.

‡ American Med. and Philosophical Register, vol. 4, p. 519. Dr. Davis's Obstetric Medicine, p. 679,) reference to this case is incorrect.

For additional instances, see Dr. William Moore, in New York Medical and Physical Journal, vol. 1, p. 151.—Dr. James Clarke, in Edinburgh Med. and Surg. Journal, vol. 5, p. 257; Ibid. vol. 29, p. 217. (A case from Rust's Magazine.)—Mr. Wildsmith, in Lancet, N. S. vol. 4, p. 739.—Mr. Cusack, in Dublin Hospital Reports, vol. 5.—Madame Boivin's Essay. A case by Mr. Watson of Warwick. The female

dent de Nemours, who was considered pregnant a whole year, and at last was relieved by a copious watery discharge.*

5. It is proper to mention that *membranes* are sometimes expelled in *dysmenorrhœa*, which have given rise to a suspicion of pregnancy and early abortion. This is accompanied by severe pain, a red discharge, and the substance thrown off somewhat resembles the decidua. But the history of the case will enable us readily to decide. All the appearances of pregnancy are wanting—the discharge recurs at every menstrual period—the membrane is slight in its texture, wants the vascularity of the true decidua, and never contains any of the transparent membranes of the ovum. Many unmarried females are periodically subject to this severe disease.†

6. A collection of air in the womb has sometimes led to mistakes as to the presence of pregnancy. This has been variously styled *physometra*, *tympanites*, and *emphysema of the womb*. In 1798, a female in the Royal Infirmary at Edinburgh stated that she was in labour. According to custom, a house pupil was sent to attend her, which he did very faithfully for two days and two

was 22 years old, and had been married nearly ten months. She had no suspicion of being pregnant, and the marks present were at least equivocal. There was no *membranous* bag investing the hydatids, and the hæmorrhage succeeding was very slight. Milk was secreted on the second day, and the lochia were present. Trans. Provincial Med. and Surg. Assoc. vol. 2, p. 349. A case with all the usual symptoms of pregnancy, by Dr. Hooker of New Haven. Boston Med. and Surg. Journal, vol. 16, p. 91.

Several instances are also related in Dr. Rutter's valuable essay on the case of Miss Burns, which I shall notice hereafter.

When the question relative to the origin of moles and hydatids shall be settled, we shall be better enabled to answer the question lately put in the Boston Medical and Surgical Journal, vol. 8, p. 71, 124, *Whether hæmorrhage from the unimpregnated uterus ever occurs?* That it is rare, is, I believe, not doubted. I observe that Dr. Ashwell at a meeting of the Guy's Hospital Physical Society, Nov. 4, 1837, referred to some instances in which hæmorrhage from the unimpregnated uterus had occurred, associated with tumours (in that organ,) of varying degrees of induration and malignity. London Med. Gazette, vol. 21, 268.

The first discharge of blood in several cases, collected by Madame Boivin is as follows:

2 at 45 days,	1 at 6 months,
1 at 2 months,	1 at 7 months,
4 at 3 months,	1 at 8 months,
2 at 4 months,	1 at 11 months,
1 at 5 months,	1 at 14 months.

The length of time in the last of these cases should be remembered, as it may occur in a widowed female, and unjustly impugn her chastity.

* Foderé, vol. 1, p. 473. This author suggests, that if water be contained in the uterus, by raising it on the point of the finger, a fluctuation more or less distinct will be perceived.

† Cyclopædia Pract. Med. vol. 3, p. 488. Dr. Denman in Medical Facts and Observations, vol. 1, p. 108. He observes that he has "the most undoubted proofs, that it may be formed without connubial communications."

nights. At the end of that period, he sent for Dr. Hamilton, the professor of midwifery, who examined her, and much to the mortification of both the student and the woman, declared that she must become pregnant, before she could be delivered. She was labouring under this disease.

An interesting case is related by Dr. Ray, of Eastport, Maine. It made its first appearance during a second pregnancy seventeen years ago, and from that time to this, the patient has never been free from it—whether impregnated or not. In the latter state, however, no inconvenience is experienced—in the former, there is always severe pain. Sometimes, but not always, the air is discharged with a crepitus—and as often as twice or thrice a week. This, however, varies, and she has never observed it to accumulate, so as to produce any perceptible enlargement of the abdomen. The most intense pain occurs after quickening.*

Cases of pretended pregnancy have occasionally excited considerable attention, from peculiar circumstances attendant on them. Of this nature was the instance of Bianca Capello, the mistress of the Prince of Tuscany, who, in order to gratify his wish of having an heir, feigned herself pregnant, and at the expected period, introduced the child of another as her own. And in more modern times Joanna Southcott, at the age of sixty-five, declared herself pregnant, and was believed by her followers in England—nay more, she even found medical men who attested to it, although she stated at the same time that she was a virgin. Her death, however, occurred previous to the expected delivery, and on dissection, no traces of pregnancy could be discovered.†

* Boston Med. Magazine, vol. 1, p. 233; See on this disease, Burns, p. 82, Denman, p. 148; Gooch, Diseases of Women, p. 242; a case by Mr. Wray, in Lancet, vol. 12, p. 396; Medico-Chir. Review, vol. 19, p. 512; two cases from an Italian Journal. One of these imitated pregnancy, in some respects; but at the sixth month it dissipated.—Ibid, vol. 22, p. 418, Review of Madame Boivin; Lee, in Cyclopaedia Pract. Med. vol. 4, p. 383.

There are some diseases to which the uterus is liable, that may occasionally be mistaken for pregnancy. Of these, Dr. C. M. Clarke mentions the *fleshy tubercle*. All, however, are slow in their progress, soon become painful, and are generally unaccompanied with affections of the stomach and breasts. They arrive at their height long after pregnancy should have been completed. The very fact of enlargement continuing more than five months, is, according to Gooch, a strong argument against its presence.

Let us also not forget, that some morbid conditions of the uterus, are compatible with pregnancy. Thus carcinoma, particularly of the cervix uteri, and even in the ulcerative stage, has occurred to Drs. Clarke, Kennedy, and others; and so also cauliflower excrescence of the uterus. Kennedy, p. 144.

† Edinburgh Review, No. 48, Art. 11. In the stormy period that preceded the

The laws for the punishment of concealed pregnancy will be introduced with most propriety in the chapter on infanticide.

To prevent repetition, I shall also delay the consideration of the appearances found on dissection, until I come to consider the subject of delivery.

III. *Of Superfætation.*

By superfætation is understood the conception of a second embryo, during the gestation of the first, or that a woman, who has advanced to any period of one pregnancy, is capable of conceiving another child.

This doctrine was very current among the ancient physicians,* and still has adherents, although the majority of the medical profession at the present day are sceptics with respect to it. Its bearing in legal medicine, is on the question of legitimacy, as I shall hereafter show.

It will conduce to a better understanding of the subject, if the cases which are deemed instances of superfætation, be first stated; and afterwards the objections to them, and the mode in which the opponents of this doctrine explain their peculiarities.

1. The following is taken from the *Consilia* of Zacchias. J. N. Sobrejus lost his life in a quarrel, leaving his wife pregnant. Eight months after his death, she was delivered of a deformed child, which died in the birth. Her abdomen remained large, and it was suspected that a second infant was contained in it, but all efforts to procure its delivery proved fruitless. One month and a day thereafter, the widow was again taken in labour, and brought forth a perfect living child. The relations of the husband contested its legitimacy, on the ground that it was the fruit of a superfætation, and Zacchias was consulted on the subject. He agreed that the two infants could not have been the product of one conception, since the interval between their birth was so great; but advanced it as his opinion, that the *first* was the pro-

abdication of James II., it seems to have been a favourite opinion among the protestants, that the pretender (as he is now styled in history) was a supposititious child. The proof in favour of this may be found in Burnet's *History of his own Times*, London, 1758, vol. 1, p. 473-524. And the whole testimony in favour and against the opinion, is collected in Howell's *State Trials*, vol. 12, p. 123.

* So common was the belief in it, that Brassavolus observes that he has seen superfætation epidemic !!

duct of a superfœtation, and conceived a month after the other. This he strengthened by the fact, that the husband died suddenly, while in a state of perfect health. His opinion preserved the character of the mother, and also gave her those legal rights to which her situation entitled her.*

Dr. Denman, in his work on Midwifery, quotes a letter addressed to the lady of Sir Walter Farquahar, by the patient herself, which contains a case belonging to the subject before us. The female went to the ninth month of pregnancy; but between the fifth and sixth, she met with a great fright, which affected her severely, and diminished her size. On the 11th of February, she was delivered of a healthy child, but continued in pain; and it was not until the morning of the 25th, that she was relieved. "On that day, there was born the head and parts of a child that had just the appearance of a miscarriage of four months."†

Additional references will be found below. It is necessary to add in this place, that the blighted ovum, is sometimes retained for a length of time. This should be not forgotten in medico-legal cases, else it may by possibility happen that an unjust suspicion will fall on the innocent. Thus, in a case that occurred to Dr. Montgomery, an ovum at two months (as was evident from its size) was not expelled until three months thereafter, and in one

* *Zacchias Consilia*, No. 66. Foderé observes, that he is assured that a female in Turin, in 1797, was successively delivered of three children, at an interval of fifteen days between each. (Foderé, 1, p. 484.)

† Cases resembling the above, are mentioned in most works on midwifery, and in many of the periodical journals. I will refer to some that I have noted.

Philosophical Transactions, vol. 60, p. 453. (Case by Mr. Warner.) *Medico-Chirurgical Transactions*, vol. 9, p. 194. Case by Mr. Chapman, where a blighted fœtus and placenta were expelled at seven months, and a living child remained to the full period of utero gestation. *Eclectic Repertory*, vol. 9, p. 531. Dr. Mease on cases of blighted fœtus. *London Medical and Physical Journal*, vol. 22, p. 47, and vol. 24, p. 232. In one of these, (case by Mr. Farrell,) a healthy child was first expelled, and in about four hours afterwards, a dead fœtus of the size of a five months' conception. In the other (case by Mr. Rolfe,) the dead fœtus, apparently of six months, was first delivered, and the full grown child shortly after. Three cases are respectively related by Messrs. Newnham, Hayes and Powell, in the *Transactions of the associated apothecaries of England and Wales*. Each of these had separate placentas; one of the blighted ova was putrid and the other not. (*New England Journal*, vol. 13, p. 241.) Case by Baron Percy, in *London Med. Repository*, vol. 20, p. 110. Case by F. W. Norton, in *New York Medical Repository*, vol. 23, p. 110. Case from Dr. John Clarke, in *London Medical and Physical Journal*, vol. 16, p. 219. Case by Dr. Fithian, in *Chapman's Journal*, N. S. vol. 2, p. 367. Case by Dr. O. H. Taylor, in *North American Med. and Surg. Journal*, vol. 4, p. 81. Case by Dr. Fahrenhorst of Lithuania. (*New York Medical and Physical Journal*, vol. 8, p. 393.) Case by Dr. Colombe. (*American Journal of Medical Sciences*, vol. 5, p. 483.) Cases by Mr. Lecson and Mr. Hunter. (*Lancet*, N. S. vol. 19, p. 133-256.) In neither of these was the shrivelled fœtus in any way putrefied. By Dr. Montgomery, *Signs of Pregnancy*, p. 205.

cited by him from Dr. Ingleby, one of three months, was not expelled until the ninth month.

2. A case mentioned by Buffon, has been often quoted by the enemies and advocates of superfœtation. "A female at Charleston in South Carolina, was delivered, in 1714, of twins, within a very short time of each other. One was found to be black, and the other white. This variety of colour led to an investigation; and the female confessed, that on a particular day, immediately after her husband had left his bed, a negro entered her room, and by threatening to murder her if she did not consent, had connexion with her."*

It has been insinuated against the credibility of this case, that one of the offspring was white. Instances can, however, be adduced, where this objection does not apply. Dr. Moseley mentions the following as occurring within his time at Shortwood estate, in the Island of Jamaica. "A negro woman brought forth two children at a birth, both of a size; *one of which was a negro, and the other a mulatto*. On being interrogated upon the occasion of their dissimilitude, she said she perfectly well knew the cause of it, which was, that a white man belonging to the estate came to her hut one morning before she was up, and she suffered his embraces almost instantly after her black husband had quitted her."†

* Foderé, vol. 1, p. 482.

† Moseley on Tropical Diseases, &c. p. 111. For additional cases, see Quarterly Journal of Foreign Medicine and Surgery, vol. 3, p. 350. Case by M. De Bouillon, from the Bulletin de la Faculté et de la Société de Médecine, 1821. A negress delivered of twins, as in Dr. Moseley's case, and who made a similar confession.

Case by Dr. Dewees—A white woman near Philadelphia; twins; one white, and one black. (Coxe's Medical Museum, vol. 1, p. 174.) Case by Dr. Trotti—A negress in South Carolina, in 1815; three children; two white, and one black. (N. Amer. Med. and Surg. Jour. vol. 1, p. 466.) Case by Dr. Guerarde—A negress in South Carolina; twins; a black and a mulatto. (Chapman's Journal, N. S. vol. 5, p. 412.) Case by Dr. Delmas of Rouen—A woman in a public hospital of that city; twins; one white, and the other tawny. (Dictionnaire des Sciences Médicales, vol. 4, p. 181. *Cas rares*.) Dr. Blundell, in his Lectures, refers to a case of this description, by Mr. Blackaller of Weybridge. (Lancet, N. S. vol. 3, p. 262.) A case at the Lying-in-Hospital, Berlin, (January 25, 1832,) of twins; one white, and the other half caste. Connexion with a negro was proved. From Hecker's Annals. (American Journal of Medical Sciences, vol. 14, p. 220.) A case in New England, of twins; one black, and the other mulatto. The mother, (black) confessed cohabitation with a white man. (Related by Dr. Holcombe, of Massachusetts.) Boston Med. and Surg. Journal, vol. 13, p. 64.

The following is, I believe, the most remarkable case yet recorded: "It was communicated to me by the Sargenté Mor of the St. Jose gold district, (Brazil.) A creole woman with whom he was acquainted in the neighbourhood, had three children at a birth, of three different colours, white, brown and black, with all the features of the respective classes." (Rev. Dr. Walsh's Notices of Brazil, vol. 2, p. 90.)

“One of the author’s pupils, (says Prof. Dunglison,) Mr. N. J. Huston of Virginia, has communicated the particulars of the case of a female, who was delivered, in March, 1827, of a negro child and a mulatto on the same night. Where negro slavery exists, such cases are sufficiently numerous.”*

3. Dr. Maton of London published the following as a case of superfoetation: Mrs. T——, an Italian lady, but married to an Englishman who was attached to the commissariat of the British army in Sicily, was delivered, on the twelfth of November, 1807, of a male child, which had every appearance of health. It was brought forth under circumstances very distressing to the parents, being dropped in a bundle of straw at midnight in an uninhabited room; and it survived nine days only. On the second of February, 1808, (not quite three calendar months from the preceding *accouchement*.) Mrs. T. was delivered of another male infant, completely formed, and apparently in good health. He was sent away to be nursed; but the nurse’s milk being deficient, he was removed soon after to another foster mother. When about three months old, however, he fell a victim to the measles, and died. From November, 1807, to February, 1808, Mrs. T. had not left Palermo, except on short excursions in her own carriage; and her husband had been constantly with her since the year 1805. He communicated this narrative to Dr. Maton, with a certificate pledging himself to its truth.†

The last instance I shall mention in detail, is one communicated to Foderé by Dr. Desgranges of Lyons, and it is certainly a very extraordinary one.

The wife of Raymond Villard of Lyons, married at the age of twenty-two, and became pregnant five years thereafter, but had an abortion at the seventh month, on the twentieth of May, 1779. She conceived again within a month; and on the twentieth of January, 1780, eight months after her delivery, and

* Dunglison’s Physiology, vol. 2, p. 324.

† Transactions of the London College of Physicians, vol. 4, p. 161. Dr. Granville, in a criticism on this case in the Philosophical Transactions for 1818, supposed that they were twins, whose ova were distinct and separate; and that one was born at the sixth, and the other at the ninth month of pregnancy. Dr. Paris was in consequence led to make further inquiries of Dr. Maton, and he found that *both children were born perfect*. The labour, though quick, was not sudden; since the accoucheur was present. All the distressing circumstances noticed, and on which Dr. Granville appears to rely, referred merely to the inability of obtaining proper accommodations. (Paris’s Medical Jurisprudence, vol. 1, p. 264.)

seven months from her second conception, she brought forth a living child. This delivery was not, however, accompanied with the usual symptoms—no milk appeared—the lochia were wanting, and the abdomen did not diminish in size. It was accordingly found necessary to procure a nurse for the child.

Two surgeons visited the female, and were at a loss with respect to her situation. They called Dr. Desgranges in consultation, who declared that she had a second child in the womb. Although this was strongly doubted, yet three weeks after her delivery, she felt the motion of the fœtus; and on the 6th of July, 1780, (five months and sixteen days after the first birth,) she was again delivered of another living daughter. The milk now appeared, and she was enabled to nurse her offspring.

It is not possible, adds Dr. Desgranges, that this second child could have been conceived after the delivery of the first. “Car le mari ne lui avait renouvelé ses caresses que vingt jours après, ce qui n’aurait donné au second enfant que quatre mois vingt-sept jours.”

The narrative of this case was accompanied with a legal attestation of it under the oath of the mother; and on the nineteenth of January, 1782, both children were still living.*

These instances will give a full idea of what is understood by superfœtation in the human species. The advocates for this

* Foderé, vol. 1, p. 484-5-6. Cases resembling these, but not so remarkable, are related by Dr. Farquhar—this occurred in the Island of Jamaica, in 1805, interval four weeks. (Coxe’s Medical Museum, vol. 2, p. 316.)

By Dr. Levrat—reported to the Medical Society of Lyons in 1827; interval of four months. *Annales de la Médecine Physiol.* April, 1827. (*American Journal of Medical Sciences*, vol. 1, p. 193.)

Three cases in the *Dictionnaire des Sciences Medicales*, Art. *Superfœtation*.

One by Madame Boivin—an interval of two months. The first was born March 15, 1810, and weighed four pounds; the second on the twelfth of May—weighed three pounds—weak, and breathing with difficulty. The female confessed that she had not lived with her husband for a long time; and that the two children were the result of only three connexions with another man, on the fifteenth and twentieth of July, and the sixteenth of September. (See Pendleton on *Superfœtation* and *Bipartite Uteri*, in *American Journal of Medical Sciences*, vol. 1, p. 307.)

A case of several successive deliveries at various periods, at intervals of two months, and another of one month, by Prof. Wendt of Breslau. This is, however, a very doubtful case. (From *Journal des Progres*, in *Monthly Journal of Foreign Medicine*, vol. 3, p. 90.)

A case by Dr. Moebus of Dieburg. A female, the mother of four children gave birth to a child of full size, on the sixteenth October, 1833; and on the 18th of November to another equally of full size. *American Journal Med. Sciences*, vol. 20, p. 481, from a German Journal.

† may add to these, a case of twins, quoted from Wildberg’s *Jahrbuch*, in which the second child was born four days after the first. Both the man and the woman asserted that they had cohabited but once. *Medico-Chirurg. Review*, vol. 29, p. 495.

doctrine consider them as conclusive testimony, while the opponents explain their peculiarities in various ways, and also endeavour to prove, that this kind of conception is impossible.

In the first place, it is urged that shortly after conception, the os tincæ, as well as the internal apertures of the fallopian tubes, are closed by the deposition of a thick tenacious mucus. The membrana decidua is also formed early, and lines the uterus, and thus co-operates with the mucus, in obliterating the openings into its cavity.*

When the gravid uterus enlarges, the fallopian tubes lie parallel to its sides, instead of running in a transverse direction to the ovaria, as in the unimpregnated state. If then an embryo be generated, the tubes could not embrace the ovum, and it would remain in the ovarium, or fall into the abdomen, and thus constitute an extra uterine conception.

But again it is said, that even if we allow the practicability of the new embryo reaching the uterus, its arrival would be destructive to the fœtus already present. The functions which have already been performed for the first conception, have now to be repeated, and an additional decidua and placenta are to be formed.

These are, briefly, the arguments urged against the possibility of superfœtation. An appeal, however, is made to cases, where, as we have already stated, two or more children of different sizes, and *apparently of different ages*, are born nearly at the same time, or at a longer interval.†

* The advocates of superfœtation deny, that this mucus closes the os tincæ completely; and they conceive that the absorption of new fecundating matter through it, is possible. Capuron, p. 110. Foderé, vol. 1, p. 483.

Dr. Cummin denies that the uterus is immediately closed, and adduces in favour of this the fact, that some menstruate during the first month—nor does he believe that the decidua, *always* closes the cervix uteri, as in Dr. Lee's case. At all events, in that, the fallopian tube was open—the decidua did not close its orifice. London Med. Gazette, vol. 19, p. 597.

† An engraving illustrative of this occurrence, is given in Cruveilhier's Pathological Anatomy, No. 6. One fœtus is about six months advanced—the term indeed of the pregnancy—while the other has about the size of one of three months. A large portion of the placenta was diseased, and to this the chord of the smaller is attached, while that of the other proceeds from the healthy portion.

Mr. Ingleby mentions cases precisely of the description suggested in the text. "A few weeks ago (says he,) on examining a mature placenta, the expulsion of which was attended with severe hemorrhage, a fœtus of four or five months, flattened, but not putrid, was found within the membranes, closely adherent to the uterine surface of the mass, and yet a full sized living child, in connexion with this placenta, had just been expelled." He has also seen a large mole or a diseased ovum expelled, while a fœtus enclosed in its proper membranes was still retained and not expelled until weeks after.

It will be observed, that in one class of instances, the lesser child is represented as dead and decayed, and its size is much smaller than the accompanying birth. Now in these, it is suggested, that twins have been conceived, and that the embarrassed situation of one child in the uterus may have prevented its development, checked its nutrition, and thus caused its death. The other, on the contrary, lives and grows, presses on the dead one which becomes flattened, or wholly or partly putrefied; and in this condition, both may be expelled at the same time, or one may be detained for some time after the other.*

It is evident that this explanation puts aside the idea of superfœtation.†

The second class of cases, where a twin birth of various colors takes place, is now universally considered as examples of contemporaneous conception. This is evidently shown by the circumstances attendant on each. Hence they cannot aid the doctrine of superfœtation.

But if we thus explain the great mass of instances that were formerly referred to it, and grant, which indeed can hardly be denied, that superfœtation is impossible in a single impregnated uterus, there yet remain some cases like those of Drs. Maton and Desgranges which require explanation. It has been attempted to do this, by supposing that a *double uterus* was present. This is far from being as rare as was at one time supposed. "The human uterus," says Dr William Hunter, "in the impregnated state, commonly has one triangular cavity. In many instances, it is found subdivided at its upper part, into two lateral cavities, so as to resemble the two horns of a uterus in a quadruped. Several specimens of such uteri are preserved in my collection."‡ Not only has the uterus been found double, but occasionally the vagina also. In the Museum at Heidelberg, Dr. Tiedemann informs us, is the uterus of a female who died nineteen days after delivery. It is divided; the left is in the state to be expected after the removal of the fœtus, while the uterus on

* In noticing the objections to this doctrine, I have made a free use of Professor Chapman's able Essay on it, in the *Eclectic Repertory*, vol. 1, p. 369.

† G. St. Hilaire advanced the idea some years since, that in every case of acephalous monsters, there is a twin born perfect, and with a common placenta. He considers the acephalous as the imperfect twin of another, whose development has been completed. *Lancet*, vol. 10, p. 748.

‡ Hunter's *Anatomy of the Human Gravid Uterus*. London, 1794, p. 6. I am indebted for this reference to my colleague, Professor Willoughby.

the right side is characterized by the absence of all appearances of impregnation. Two vaginæ are also present.* This female

* Quarterly Journal Foreign M. and S., vol. 5, p. 438. All the cases related by authors, of double uteri, have been collected by Dr. Cassan, in his "*Recherches sur les cas d'uterus double et de superfœtation*," 1826. He enumerates no less than forty-one, among which are those of Haller, Purcell, Canestrini, Eisenmann, Polé, Dupuytren, West, Ollivier, and one examined by himself, Dumeril and Madame Boivin, in which both uterus and vagina were double. See also Martin, on a variety of the Human Uterus (from the *Revue Medicale* of 1826,) for a list of cases. *Lancet*, vol. 10, p. 780.

The instances that have been recorded since the publication of Cassan, are one by Dr. Geiss of Traffurth, near Erfurt. The labour pains were confined to the right side. On that, the uterus was as high as the thorax; on the left, it did not extend above the navel and inclined forward and laterally. The operation of turning was performed, and a healthy female infant born—the right side subsided—the left continued prominent. In one hour labour pains returned, when Dr. G. found membranes protruding through an opening in the left side, which extended upwards into a cavity. A second child presented and was safely delivered by turning. The right placenta came away first, and the right womb contracted, then the left placenta, but its womb contracted slowly, and she lost a good deal of blood. Dr. G. satisfied himself by examination, that this was a case of double uterus. Two years afterwards, she was again delivered of a single child. From Rust's Magazine. (Edin. M. and S. J. vol. 29, p. 254.)

Case by Dr. Duges. From *Journal des Progres*, in *American Journal of Medical Sciences*, vol. 4, p. 447.

Case of double uterus and vagina at the Hotel Dieu in 1827. The uterus was unimpregnated. The female died of hæmatemesis. (*New York Medical and Physical Journal*, vol. 9, p. 191.)

A case from Meckel, quoted by Carus, *Gynæcology*. (*American Journal of Med. Sciences*, vol. 6, p. 432.)

Dr. Moreau recently exhibited to the French Academy of Medicine (Jan. 15, 1833) a bilobed uterus divided into two equal lateral halves, each provided with a tube and an ovary; each separated from the other by a double partition, and each having distinct necks and mouths into a single vagina. The mother died after delivery—the fœtus was a male, and had been developed in the left cavity. (*Medico-Chir. Review*, vol. 23, p. 234.)

Mr. Adams, a student in Guy's Hospital, relates a case of double uterus found in a body brought in for dissection. The subject was unimpregnated. The superior two-thirds of the uterus were divided by a septum into two equal parts, the neck was natural, with an opening common to both canals. Length of the septum $1\frac{1}{2}$ inches—whole length of the uterus $3\frac{1}{4}$. (*London Med. Gazette*, vol. 13, p. 898.)

Le Roi's case, from the *Journal des Connoissances Medicales*, for Feb., 1835. This female had menstruated for two years, and while the menses were flowing she was seized with intense pain, and a tumour was discovered in the cavity of the pelvis. She died shortly of peritonitis. On dissection, the uterus was found bilobed—the left lobe communicated with the vagina, and the right had no external communication. In its cavity the menstrual fluid had accumulated, and thus formed the tumour. (*American Journal of Med. Sciences*, vol. 17, p. 525.)

Case by Dr. Albers, of Bonn. The bilobed uterus in this case was extremely small, and hardly connected with the vagina. (*British & Foreign Medical Review*, vol. 3, p. 221.)

Cases from a Memoir of Mr. Louis, read before the Royal Academy of Surgery, in 1790. This memoir, it is stated, has never been published. (*Medico-Chirurgical Review*, vol. 30, p. 223.)

Case by Scheider, of a woman, who, six weeks after marriage bore a four months' child, and forty weeks after marriage, mature twins. On examination, the uterus and vagina were both found double, and each vagina had a separate orifice. (*London Medical Gazette*, vol. 20, p. 408.) From Muller's Archives, for 1836.

Davis' *Obstetric Medicine*, p. 514, &c., contains an account of the cases collected by Voigtel.

Cases are also figured by Cruveilhier in his *Pathological Anatomy*, Nos. 4 and 13.

was seen by two physicians during her labour. One declared that the neck was in a natural state—while the other found it dilated, and said that the head of the child was engaged—a second examination convinced both that the neck was double, and the investigation after death verified it.*

But although this variety in the organization of the uterus may explain several of these cases, and in particular that of Desgranges, as is done by Velpeau and Cassan, yet there are intrinsic difficulties attending the solution. It has been inquired whether menstruation goes on in the unimpregnated half? If it does, it will account, as is supposed, for the occasional presence of that discharge, or something much resembling it, during pregnancy. In Canestrini's case, however, it is distinctly stated that it had not taken place during that process.† The others give us no information on the subject.

A more formidable objection, founded on anatomical observation, has been recently presented by Dr. Robert Lee. He examined, in 1831, a female who died eight days after parturition. She had had several children. The uterus was double from the fundus to the cervix, and thus divided into lateral halves. The fœtus had been in the right half, which had one ovarium and one fallopian tube connected with it. The left was furnished with similar appendages. Both ovaria were enlarged, but the right most so, and it contained a corpus luteum; the left had none. The internal surface of the left *was coated every where with a deciduous membrane*; and at its opening into the cervix, it formed a shut sac. Now such a disposition, remarks Dr. Lee, if it always exists, which he deems probable, must render superfœtation impossible.‡

We must also recollect, that in the remarkable cases of children born several months from each other, no examination has

In one instance, communicated by M. Berard, the uterus and vagina were each double. This female had been thrice married, but had only one child, which arrived to the full time and died during delivery. The labour was extremely difficult. In another, the uterus alone was bifid. The female had been delivered about six weeks previous of a living child, and the lobe in which it had been contained bore all of the marks of this, while the other had not the slightest indications of development. Where the uterus is merely divided into two chambers (*cloisonné*) and not bilobed, the empty portion appears to sympathize in the progress of pregnancy. (See Plate 5 of No. 13.)

* Velpeau's Midwifery, p. 79; Cassan, p. 28.

† Cassan, p. 39. This case is related in detail in *Med. Facts and Observations*, vol. 3, p. 171.

‡ London Med. Gazette, vol. 11, p. 176, from *Med. Chirurg. Transactions*, vol. 17, p. 473.

yet been made to prove that *there* double uteri existed. "They are ascribed (says Richerand) to septa dividing the uterus into two cavities, merely because such an arrangement would explain to a certain degree how two conceptions might take place at some interval from each other; for it has never been ascertained by actual dissection, that any woman in whom such superfœtation took place, had a double uterus."*

Should the doctrine of superfœtation ever be pleaded in medico-legal cases, we must be guided by the laws of legitimacy, both as to premature and to protracted births. The latest born should fall within the legal term, or be excluded from the privileges attendant on it; and this is more particularly necessary, from the obscurity that invests the subject.

IV. *Of some medico-legal questions connected with this subject.*

Two questions relating to pregnancy, have been suggested, which deserve some notice.

1. *Can a woman become pregnant, and be ignorant of it until the time of labour?* I cannot better preface an examination of this, than by observing, that with women, certain appearances are often referred to the cause from which they wish them to originate. Thus, married females attribute their indisposition and ailments to the presence of pregnancy; while those who, from being unmarried, and enjoying guilty pleasure, dislike that idea, charge any alteration that may occur, to disease. Of this nature is the case related by Mauriceau, where a female, who had been secretly married, took every precaution to avoid pregnancy, and not only deceived herself, but also an old physician, who prescribed for her, as having a schirrous womb, until the night before her delivery. In another instance, a female, aged thirty-five, who had made the most solemn vows of chastity, deceived many physicians, who treated her for dropsy of the womb.† Fo-

* Richerand's Physiology, p. 357. The only cases in which Cassan considers superfœtation possible, are, 1. Where there is a perfect double uterus; 2. Where there is a pre-existing extra-uterine pregnancy; and 3. When there is a new conception before the fecundating germ has occupied the cavity of the uterus. The experiments of Haller, Hunter and Haighton, and more recently of Home, John Burns, and Magendie, prove that the ovum sometimes does not descend into the womb until eight, fifteen or even twenty days after fecundation.

† Mauriceau, vol. 2, p. 111, 205.

deré himself relates an instance which happened to an acquaintance, who was sent for to a nun labouring under a violent colic, and who continued to deny her being with child, until the cries of the infant silenced her.*

We may smile at these narratives; but the subject assumes a grave importance, when the question is asked judicially. A case in which it was made the matter of investigation, is related in the *Causes Célèbres*, and an abstract of it may prove useful.

In 1770, a female aged twenty-five, and named Louisa Bunel, residing in the bishopric of Avranches in France, was seduced, and became pregnant. It was in the month of August, when field labour is the most severe, that she experienced a cessation of the menses. She attributed this to the fatigue she had undergone; and feigning ignorance of her situation, declared herself dropsical. She applied to several monks for medical aid, and took diuretics, but without effect. Finally, at the sixth month she married, but not to her seducer; and after that, repeatedly took an infusion of savin in wine. At the end of three months, being alone, she was delivered of a child, which she afterwards declared was born dead, and which she covered with linen, carried to a neighbouring field, and put under some leaves. Eight days after, a dog discovered the body, and brought some rags from it to the house of a neighbour. Judicial search was now made. Louisa was discovered to be the mother, and was condemned to death for committing infanticide. Her plea was, 1. That she was perfectly ignorant of her pregnancy; and that the remedies she had taken, were solely with a view to remove her supposed dropsy. 2. That the child was born dead; and 3. That at the time of delivery, she was so extremely weak for four hours, that she could not call for assistance; and on reviving, preferred burying her shame, since it was useless to expose herself by showing a dead child. An appeal was made to the superior court at Bayeux, who, after taking the opinions of sixteen physicians at Paris, on the case, reversed the sentence on the 11th of November, 1772, and discharged the prisoner.†

The case, in the opinion of these physicians, turned on the following points:—1. Could the accused be ignorant of her preg-

* Foderé, vol. I, p. 421. † Foderé, 1, p. 491, quoted from the *Causes Célèbres*.

nancy, and confound it with another complaint? 2. Could she innocently make use of the remedies that she confessed she had taken? and 3. Is it certain that the child was born dead; and if so, what occasioned its death? The two first only relate to our subject, as the third belongs to infanticide. Our medical judges answered both in the affirmative, on the ground of the uncertainty of the signs of pregnancy, and the ease with which it might be confounded with other diseases. They adduced in favour of this, the authority of Astruc, Zacchias, Senac, and Hebenstreit. This last observes, that a female might be impregnated when intoxicated, and might go to the full time without knowing it; and on being seized with pain, might mistake it for colic or painful menstruation.*

Foderé, in remarking on this case, very justly observes, that although instances have occasionally occurred where married women have mistaken their situation, yet the sex generally ridicule the idea of this pretended ignorance. And in those which usually will come before a court of justice, the reply to such a plea should be—*Have you not exposed yourself to become pregnant; and on what account, then, were you so confident of the usual consequences not following it?*†

* Hebenstreit, p. 386. There appears to me to be an intentional misrepresentation of our author in this instance. He evidently only refers to an extreme case. On the main question he observes, “*Histamen non obstantibus, et quamvis vera, nec ex catameniorum defectu, nec ex tumore abdominis, aut lactis in mammis presentia, de graviditate convictio nasci possit; impossibile tamen est, gravidam, quæ vegetum, fortemve embryonem, et talem qui ad usque partus legitimum terminum sine morbo pervenit, matrice tulit, motus istos magnos, qui prope finem sanæ et commodæ graviditatis sunt, non percepisse.*” (Page 385.)

† A reviewer in the Edinburgh Medical and Surgical Journal, who I presume is Dr. Christison, speaks thus on this point; “*Can a female be ignorant of her pregnancy, till the child is brought forth?* There are manifestly three conditions required before we can believe such a thing possible, viz. that impregnation took place without her knowledge—that her pregnancy imitate some natural disease, and that her delivery be accomplished either suddenly or without her knowledge.” As to the first, he concedes that it may take place if she be not a virgin, and in every circumstance during the profound sleep induced by narcotics. It may also be deemed to be hydrometra or dropsy of the uterus, and thus deceive during the whole progress of pregnancy, not only the female but the most accomplished accoucheurs. The last we know does sometimes occur. Thus, he remarks, “It is obvious that a person may be delivered without being previously aware of her pregnancy; but since each of the three requisite conditions is exceedingly rare, we may justly pronounce it barely within the bounds of possibility, and only to be credited, in individual cases, when the female gives sufficient evidence that the conditions in question did actually exist. Farther, as the third condition can exist only in the case of those who have borne children, the plea of ignorance must necessarily be excluded from the greater number of trials, *which too generally concern those who have erred for the first time.*” (Vol. 19, p. 452-4.)

The following are laid down by our author, and I think correctly, as the only cases in which ignorance is possible.

Where the female is an idiot. An instance of this kind occurred to Dr. Desgranges, in a young woman in France, who having been long tempted, was at last prevailed on to have connexion in the bath, as this, it was stated, would prevent conception. In a short time, however, the menses ceased. She became alarmed for her health, and consulted several physicians, who administered medicines; and in this state she continued without suspicion, until the approach of labour. Dr. Desgranges states it as his opinion, that the assurances of her lover had banished all ideas of the possibility of pregnancy. The female made this assertion herself to him, and her conduct previous to delivery was calculated to strengthen it, as there were no attempts to conceal herself.*

Where a female has conceived when in a state of stupor, either from spirituous liquors or narcotics, or when in a state of coma or asphyxia. A virtuous young woman was thus violated at Lyons, during the period when the horrors of the French revolution were at their height. A powerful dose of opium was administered; the crime was completed; and in a short time she found herself pregnant, without knowing by whom.

In all other cases, the female may indeed entertain doubts concerning her situation; but doubt presupposes something to be suspected, while ignorance is not aware of any thing.†

2. *Can a female become impregnated during sleep, without her knowledge?* This question has already been incidentally noticed, and it is not necessary to enlarge on it in this place. In females habituated to sexual connexion, or where sleep is unnaturally

* This and the succeeding case were communicated to Foderé by Dr. Desgranges. (Foderé, vol. 1, p. 496, 497.)

† I find the following case mentioned in Dr. Gooch's Lectures on Midwifery, p. 81. As he seems to have credited it, it is probably an exception to the rule I have before quoted from him. "A maid at an inn, who was always thought to be virtuous, and bore a good character, began to enlarge in a way which excited suspicions of pregnancy. She solemnly declared that she never had connexion with any man. At length she was delivered, and was afterwards brought before a magistrate to swear to the father; but she repeated her former declaration. Not long afterwards, a post-boy related the following circumstance: That one night he came to this inn; put his horses in the stable, and went into the house, and found all gone to bed except this girl, who was laying asleep on the hearth rug; and without waking her, he found means to gratify his desires. This shows that impregnation may take place without the knowledge of the female, or any excitation of the sexual passion."

produced, there is no doubt of its occurring ; whereas in the opposite cases, the probability is greatly lessened. Authors, in remarking on this question, run into copious disquisitions on what is necessary to cause conception ; but on this I have already intimated an opinion, which it is not necessary to repeat.*

* The following case may be added to those already related : A pregnant female, in her last moments, solemnly declared, that to her knowledge, she never had connexion ; but that a person in the family, some time previous, had given her some wine to drink, after which she fell into a profound sleep. She was not, however, conscious of any thing having occurred to her during that state ; but mentioned the circumstance, as probably explaining her situation. (Meierius in Brendel, p. 99.)

CHAPTER VII.

DELIVERY.

PART. I. 1. Signs of delivery—period within which the examination should be made. Concealed delivery. Pretended delivery—modes in which it may present itself—where there has been no pregnancy—where there has been previous delivery—where there has been an actual delivery, but a living child has been substituted for a dead one. Appearances on dissection, indicative of a recent delivery. Case of Mr. Angus. Corpora lutea—their value as a proof of impregnation. Case showing the necessity of ascertaining the birth of an infant. 2. Possibility of delivery without the female being conscious of it. Whether a female, if alone and unassisted, can prevent her child from perishing after delivery: Application of this in cases of infanticide: Instances in which this plea should be received.

PART II. 1. Signs of the death of the child before and during delivery. 2. Signs of its maturity or immaturity—its appearance, size, length and weight at various periods during pregnancy. Weight of infants born at the full time—length. Other characters which mark the maturity of the child. 3. The state necessary to enable the new-born infant to inherit—its capability of living—the time when it is generally deemed capable. Laws of various countries as to what constitutes life in the infant, and thus enables it to inherit—Roman, French, English and Scotch laws. Medico-legal cases, in Italy—State of New York. Infants extracted by the cesarean operation—their capability of inheriting: laws on this subject. First born of twins. How far deformity incapacitates from inheriting. Monsters: laws on this subject.

DELIVERY may be considered, 1, as it respects the mother: and 2, as it respects the child. We shall accordingly divide the chapter into two parts; and with respect to the mother, we shall notice,

1. Concealed and pretended delivery.
2. Some medico-legal questions connected with the subject.

The second part will comprise a view of,

1. The signs of the death of the child before or during delivery.
2. The signs of maturity or immaturity. And
3. The state necessary to enable the new-born infant to inherit.

PART I.

I. Of concealed or pretended delivery.

Delivery whether concealed or pretended, can alone be elucidated by referring to its real signs; and it will therefore be proper to commence with a notice of them.

If the female be examined within three or four days after the occurrence of the delivery, the following circumstances will generally be observed: greater or less weakness, a slight paleness of the face, the eye a little sunken, and surrounded by a purplish or dark-brown coloured ring, and a whiteness of the skin, like a person convalescing from disease. The belly is soft, the skin of the abdomen is lax, lies in folds, and is traversed in various directions by shining, reddish and whitish, (sometimes pearly) lines, which especially extend from the groins and pubis to the navel. These lines have sometimes been called *lineæ albicantes*, and are owing to the giving way of the true skin under the distension caused by the gravid uterus. Hence they are most marked at the umbilical region.* The breasts particularly about the third or fourth day after delivery, are tumid and hard, and on pressure emit a fluid, which at first is serous, and afterwards gradually becomes whiter; and the presence of this secretion is generally accompanied with a full pulse and soft skin, covered with a moisture of a peculiar and somewhat acid odour. The areolæ round the nipples are dark coloured. The external genital organs and vagina are dilated and tumefied throughout the whole of their extent, from the pressure of the fœtus. The uterus may be felt through the abdominal parietes, voluminous, firm, and globular, and rising nearly as high as the umbilicus. Its orifice is soft and tumid, and dilated so as to admit two or more fingers. The fourchette or anterior margin of the perinæum is sometimes torn, or it is lax, and appears to have suffered considerable distention.† A discharge, (termed the lochial) commences from the uterus, which is distinguished from the menses by its pale colour, its peculiar and well known smell, and its duration. The lochia are at first of a red colour, and gradually become lighter until they cease.‡

These are the signs enumerated by the best writers on the sub-

* Along with these, Dr. Montgomery, (p. 304, 307,) has *sometimes* noticed a brown line of about a quarter of an inch in breadth, extending from the umbilicus to the pubes, and especially in women of dark hair, and strongly coloured skin.

† "With the birth of the first child the commissure is generally torn through and the fossa disappears with it, though not always; so that the existence of these parts is no disproof of previous child-birth, and I remember myself a case in which, though I had delivered the patient not without difficulty, with the forceps, the commissure and the fossa existed afterwards in all their perfection." (Blundell's Lectures, Lancet N. S. vol. 4, p. 641.)

‡ Foderé, vol. 2, sec. 1; Mahon, vol. 1, p. 166 to 170; Capuron, p. 124; Hutchinson on Infanticide, p. 90; Burns, p. 326.

ject, and where they are all present, no doubt can be entertained that delivery has taken place. Several of them, however, require further notice, for the purpose of indicating the mistakes which observers may experience concerning them.

1. The lochial discharge might be mistaken for menstruation, or fluor albus, were it not for its peculiar smell, and this it has been found impossible, by any artifice, to destroy.

It also is variable as to the time of its continuance. In some, it does not remain red for more than a day or two.

2. The soft parts are frequently relaxed as much from menstruation, as from delivery; but in these cases, the os uteri and vagina are not so much tumefied, nor is there that tenderness and swelling. Dr. Montgomery also attaches great importance to a peculiar condition of the os uteri. Its labia, he says, in those who have borne children, are jagged and notched. There is hardly any other cause except child-birth, that can leave this state.* Again, when all signs of contusion disappear after delivery, the female parts are found pale and flabby. This circumstance does not follow menstruation.

3. The presence of milk. This must be an uncertain sign, for the reasons stated in the chapter on Pregnancy. "*It is possible for this secretion to take place independently of pregnancy.*"† The most unequivocal form in which it can appear, is when the breasts are tense and painful, and filled with the fluid, of its usual nature—not serous or watery, as is observed in pretended cases. It is also to be remarked, that this secretion goes on during the presence of the lochia; while, on the contrary, the breasts become flaccid and almost empty, if the menses supervene, and fill again when they disappear.‡ Should, therefore, a case occur where doubt is entertained, it would be proper to notice the state of the breasts while the discharge (of whatever nature it may be) is present.

4. The *lineæ albicantes*, being caused by a "giving way of the true skin, under the distention caused by the enlarged uterus," may also be the consequence of dropsy or of lankness following

* "The converse of this, however, will not hold good. The unfissured state of the uterine orifice will not be sufficient proof against the former occurrence of child-birth." Signs of Pregnancy, p. 299.

† Burns, p. 326. The error in the 3d (London) Edition, of substituting "*impossible*" for "*possible*" in this quotation, and which is noticed by Professor Montgomery, is not mine. It is correct in the edition published here.

‡ Foderé, vol. 2, p. 15.

great obesity. Indeed, any cause producing much distention may give rise to them. On the other hand, this state of the parts is occasionally not very striking after the birth of a first child, as they shortly resume their original state.

5. The lineæ albicantes will often remain for life, and hence should not be depended upon in cases where females have had several children.*

It is hence the duty of the medical examiner to view all the signs enumerated in connexion; and where all or most of them are present, it is his duty to declare that they are the consequence of SEXUAL CONNEXION.† So far he can pronounce with safety. But if the question has a bearing on the charge of infanticide, the existence of the child should be proved. I make this remark out of its place, but it cannot be too often repeated in a treatise on legal medicine. To prevent mistakes, inquiry should also be made, whether the individual has laboured under dropsy, menorrhagia, or fluor albus; or whether any external violence has been applied to the genital organs.

The next subject of inquiry is, *within what time should this examination be made?*

An astonishing difference occurs among females, in the period of recovering from the effects of delivery. Some have been known to proceed to their occupation on the day that the child is born, while others remain enfeebled for weeks. Much in this respect depends on the constitution and habits of life. There is, however, a term in all, when the signs of delivery disappear, and the parts return to their natural state; and a general rule ought to be established in legal medicine, beyond which an examination should be deemed inconclusive and void. A majority of writers

* They are sometimes wanting in females who have had several children: and Dr. Montgomery saw them very marked in a male labouring under general dropsy. (Cyclopedia of Practical Medicine.)

A similar appearance (of white silvery lines) has been occasionally noticed by our author, on the breasts of young females, particularly when those parts have been greatly and rapidly enlarged during pregnancy. Signs of Pregnancy, p. 296.

† "All the recent continental writers agree, that if the signs related be all, or nearly all, found in the person of the prisoner, the conclusion is infallible; and that whatever a few obstinate accoucheurs may have been urged by the spirit of contradiction to allege, they are never imitated conjointly by any disease whatever. At the same time, a just and necessary caution is added, against placing reliance on any one sign, or even on several of these together, since frequent experience has shown, that though never found conjointly but after delivery, they are often produced individually by other causes." (Edin. Med. and Surg. Journal, vol. 19, p. 454.)

have fixed on the term of eight or ten days, for this purpose; and it is probably a correct one. After that period, the signs become equivocal, and may lead to error, particularly if the delivery has been natural.*

Zacchias remarks expressly, that the proofs of delivery become uncertain after the tenth day; and this uncertainty increases until the fortieth, when the abdomen, with the exception of the white lines, returns to its natural state, particularly if the female be healthy. Michael Alberti, a celebrated professor of his day, and Bohn, professor at Leipsic, both recommend the visit to be made within the week; and in a case before the parliament of Paris, in 1767, Petit and Louis reported in favour of acquitting a female suspected of infanticide, on the ground that the investigation had been made at too late a period.† The following case, which came before the criminal court of the department of the Seine in 1809, presents a most striking instance, in which the delay alone seems to have prevented the detection of the crime.

On the 11th of June, 1809, a female named Aimée Perdriat, went to the lodgings of a friend called Rosine, who resided in the fifth story of a house in Paris. She requested leave to remain, as she felt ill with a headache and a violent colic. Shortly after her being shown to a room, a lodger in the third story heard a noise in the water-pipe, as if a heavy body passed through it. She was not visited by any one, except Rosine and another female, for the purpose of inquiring whether she wanted any thing. About five hours after the arrival of Aimée, Rosine observed blood on the stairs and on the floor of the chamber; and Aimée remarked that her menses flowed very profusely.

Suspicious appear to have been excited; and on the 17th, the privy was searched. A foetus, placenta, and bloody cloths were

* Farr (p. 50 and 51,) enumerates certain signs that a woman has *formerly* been delivered of a child, which it may be proper to mention. The loss of all the signs of virginity. The orifice of the uterus wanting its conical figure, and its lips unequal. An expanded and pensile abdomen. The lineæ albicantes. The frænum of the labia obliterated; the breasts flaccid and pendulous; the nipples prominent, and the areolæ of a brown colour.

"The most precise criterions of the date of delivery, are derived from the date of the milk fever, the gradual alterations of the lochia, and especially the appearances assumed by the genital organs in their return to the ordinary healthy condition." Edin. Med. and Surg. Journal, vol. 19, p. 458.

† Foderé, 1, p. 17. "Hæc primis post partum diebus a medicis dijudicari possunt, si vero suspicio tardius oriatur, nec in matre, nec in infante, signa rei recte definiendæ supersunt." (Ludwig, p. 44.)

found; and two surgeons, who examined the body, deposed that no marks of violence were present, except that the umbilical cord was torn off; that it was a full grown child; and that from their experiments, it certainly had breathed after birth, and there were proofs of this having continued even in the filthy place, from which it was drawn.

She was arrested on the suspicion of having been the mother of this child; and the suspicion was fortified by a previous refusal to admit the examination of a midwife. On the 15th, 17th, and 27th of July, being more than a month after the supposed delivery, she was examined by Baudelocque, Dubois, Ané, Dupuytren, and Lafarge. They unanimously declared, that there was no sign present which indicated the delivery of the female at the time in question. She was accordingly acquitted.*

It is impossible, I conceive, to reflect on this case, without coming to the conclusion, that this woman was guilty. But if the physical signs of the crime are so slowly attended to, judges are certainly justified in leaning to the side of mercy.†

Delivery is most commonly CONCEALED under the idea of destroying the offspring immediately after birth. In suspected cases, therefore, the examining physician should attend, 1. To the proofs of previous pregnancy. On these I have already dilated; and will only add, that ordinarily no investigation has taken place at the time when this was advancing. Circumstantial evidence is not to be trusted; but it is proper to inquire whether an enlargement of the abdomen has been observed—whether this was connected with any apparent disease, and whether any precautions as to dress were used to conceal it. 2. The proofs of recent delivery;‡ and 3. To the connexion between the supposed

* Foderé, 2, p. 18.

† A case of an opposite nature, where the female was evidently accused wrongfully, with the reasoning of Zacchias in her favour, is contained in his *Consilia*, No. 69. There was no milk present—the breasts flaccid—no lochial odour—the parts very slightly tumefied, and her strength not affected. He deemed it nothing more than a profuse menstruation, following a retention which had caused the enlargement of the abdomen.

Ovarian dropsy has also been mistaken for pregnancy and the character of the female injured, until a proper investigation has led to the establishment of the truth.

‡ The following case which I find in a recent journal, is a most unequivocal one, and we can only explain the decision by supposing that some *superior influence* intervened to quash the investigation.

A female in June and July, 1827, complained of dysmenorrhœa and its accompanying symptoms. Her abdomen enlarged and there was a suspicion of pregnancy.

period of parturition, and the state of the child that is found. An infant recently born, is indicated by the redness of the skin, and by the attachment of the umbilical cord to the navel; and the female, if the mother, will be found to have the marks of a late delivery on her. The question, whether it was living after birth, belongs to infanticide.

In **PRETENDED DELIVERY**, the female declares herself a mother, without being so in reality. This is not so revolting to our feelings as the former, but it is, notwithstanding, improper, and should be guarded against. Its most common origin is cupidity, or a weak desire to produce an heir to large estates; and hence, we hear most of it in Europe, where property is entailed, and families anxiously desire the birth of a son to perpetuate their honours.

In France, pretended delivery was formerly punished with infamy and banishment. In 1772, a female in Paris, who was sterile, resolved to gain the favour of her husband by pretending pregnancy, and at the end of the proper period, obtained an infant from one of the hospitals. She effected this by the aid of a midwife, who attended during the assumed labour. Unfortunately, however, the parents of the child repented of having put it in the hospital, and endeavoured again to obtain it. Failing in this, they took steps to discover where it was, and ascertaining, a full disclosure took place. The woman was sentenced to make the *amende honorable*, with a writing on her breasts, containing these words: "A woman who stole a child, in order to

But she denied its correctness and attributed her illness to wet feet. She was dismissed from service and returned to her parents. On the 14th of March, 1828, she was understood to have had so severe a hæmorrhage as to be confined for several days to her bed. The abdomen was reduced in bulk. These circumstances led to a legal inquiry. Drs. Millet and Giraudet examined her on the 25th. They found her skin warm, countenance slightly flushed, pulse full and frequent, and tongue natural; the breasts tumefied and its veins enlarged, and on continued pressure, a thick milky fluid was obtained in abundance. The abdomen was a little swelled, umbilicus projecting (*saillant*,) *linæ albicantes* present, and the skin wrinkled and contused. The insides of the thighs had also red spots. On examination per vaginam, the uterus was found heavy and more voluminous than in the unimpregnated state. Its orifice was soft, irregular, and readily admitted two fingers. A thick, yellowish matter of the odour of fish oil, issued from the genital organs, and these externally were much dilated, flaccid, and as if recently swollen. *Le frein de la vulve étoit déchiré*.

The medical examiners could do no less than to declare that a delivery had very recently taken place. The criminal tribunal, however, refused to pursue the subject on the ground of the irreproachable manners of the female and the appearances noticed arising from some other cause! Well might Leuret, the reporter of this case, ask, whether hæmorrhage alone would produce all these signs. (*Annales D'Hygiène*, vol. 3, p. 221.)

pretend being a mother," and was afterwards banished during her life from Paris. The midwife bore a similar writing, which purported that she was one who, abusing her station, had assisted and favoured the pretending of maternity, and she was condemned to perpetual imprisonment. The parliament, however, on an appeal, lightened the punishment, and ordered her to be admonished and fined.*

The penal code now in force in France, (sect. 345,) prescribes imprisonment as the punishment for concealing an infant—for substituting one child for another, and for pretending that a child has been born.†

Pretended delivery may present itself under three points of view. 1. *Where the female, who feigns, has never been pregnant.* This, if thoroughly investigated, may always be detected. There are signs which must be present, and cannot be feigned. An enlargement of the orifice of the uterus, and a tumefaction of the organs of generation, should always be present; and if wanting, are conclusive against the fact. Dr. Male mentions a case which happened to a surgeon in Birmingham not long since. "Being called to a pretended labour, a dead child was presented to him; but there was no placenta. He proceeded immediately to examine the woman, and found the os tincæ in a natural state, nearly closed, and the vagina so much contracted as not to admit the hand. Astonished at this appearance, he went to consult a medical friend; but before any further steps were taken, it was discovered that he had been imposed upon. The woman, in fact, had never been pregnant; and the dead child was the borrowed offspring of another. She was induced to practise the artifice,

* Foderé, vol. 4, p. 406, from the *Causes Celebres*. "A case worthy of record occurred lately in the north of Scotland. A fœtus was found in a sink, and notice of this occurrence was immediately given to the clergyman of the parish, just as he was going to church. The worthy pastor was aware that a very few days' delay might render all inquiry fruitless, so at the conclusion of the service, he informed the congregation of what had happened; adding, that as the child was found within the bounds of the parish, an imputation would necessarily lie against the young women of the parish, and jealousies, doubts and suspicions would arise, to the total subversion of Christian charity, and good neighbourhood throughout his cure, and inviting all the young women who wished to maintain their reputation, to exhibit themselves next morning before the kirk session. Accordingly, on the following day, the minister and elders, with a midwife and the village surgeon, as assessors, held a *grande reconnaissance*, by means of which the unfortunate mother was detected. She was found guilty of concealment of pregnancy." DUNLOP.

† Capuron, p. 18.

to appease the wrath of her husband, who frequently reproached her for her sterility.”*

Dr. Billard, of Angers, in France, relates the following: A farmer, aged seventy-two, had been married four years to a female aged forty-two, when she declared herself pregnant. Her abdomen gradually enlarged. On the 27th of July, 1829, she stated, that when alone, at break of day, she had been delivered of a female infant. She had cut the cord and made the ligature, and the after birth, which could not be found, she had left at the door of the house. In proof of her narrative, was her bloody linen, and a child, which when placed at her breast, could obtain no milk. The husband was at first elated with the circumstance, but soon became suspicious through the remarks of his relatives, and he delayed to register the child.

A legal inquiry was instituted, and Dr. Billard was appointed the medical examiner. The infant, from her account, was fifty-three hours old. It was seventeen or eighteen inches long. The epidemic exfoliation was in full activity, and the skin red. The cord had fallen off that morning. It was buried, but he caused it to be disinterred. It was wrinkled, dry, slightly sanguinolent at one end, and brown and neatly cut at the other. A proper ligature was also found on it. The infant had thick hair—it cried lustily, moved and drank with perfect freedom; the nails were formed, and none of the sebaceous matter, common to newborn infants, was found on it, nor was any meconium observed.

Dr. Billard decided from these circumstances, and particularly from the state of the cord, and its falling off spontaneously—from the colour of the skin, and the exfoliation—that instead of two, the infant was probably from five to seven days old. And further, that from the state of the cord, it had evidently been secured by an expert, and not by a solitary female labouring under the effects of present delivery.

Dr. B. now examined the pretended mother. The breasts were not enlarged—nor were there any marks of the secretion of milk present. The abdomen presented no lineæ. There was no discharge from the vagina; and, indeed, that part was contracted, and the labia perfectly natural. The uterus was light and easily

* Male, p. 212. A case of a somewhat similar nature is mentioned by Capuron, p. 110—and another by Mr. Thomson in London Med. Gazette, vol. 19, p. 231.

raised, and had the feel of perfect contraction. Its mouth was neither tumefied, nor irregular. The result was unavoidable. Dr. Billard denied her previous pregnancy and delivery, and she was forced to confess the fraud.*

2. *Where the pretended pregnancy and delivery have been preceded by one or more deliveries.* The facility of counterfeiting in this case is certainly greater than in the former, particularly if the examination be not made within eight or ten days. Attention should be given to the following circumstances: The mystery (if any) that has been affected respecting the situation of the female—her age, and particularly whether she has been previously barren; and the condition of the husband, whether aged or decrepid. All these would be corroborating evidence against the actual occurrence of delivery.

3. *Where the female has been actually delivered, and substitutes a living for a dead child.* This cannot be elucidated by physical proofs, unless some persons have been present at the delivery. And in this, as well as in the former case, a strict examination should be instituted, of the witnesses who have attended. Zaccchias and Mahon† lay considerable stress on the resemblance that may exist between the parent and child; but this is of little value.

It sometimes happens, that the female dies shortly after the supposed or pretended labour; and it is necessary to examine the body, in order to ascertain the truth. We are to examine both the uterus and its appendages—as it is evident that the former may have been enlarged from causes independent of actual pregnancy.

The appearances that are considered to indicate delivery, are

* Annales D'Hygiène, vol. 2, p. 227. "March 21, 1775, a very extraordinary affair happened at a certain hospital. Two women, one of whom having the appearance of a nurse, the other of a maid servant, applied to the committee to let them have a male child, the youngest in the hospital, for their lady, who wanted to adopt one as her own. These women, on the committee's closely examining them, confessed that the lady's husband was gone abroad, and as she told him before he went, that she believed she was pregnant, it was necessary to show him a child: they likewise acknowledged the lady came from the Isle of Wight to London, to lie in. As it appeared that the adoption of this child was calculated to deprive some heir-at-law of an estate, or for some unlawful purpose, the intention of this paragraph is to caution those persons whom it may concern, to be on their guard against such infernal practices." (Dodsley's Annual Register, 1775. Chronicle, p. 101.)

† Zaccchias, Lib. 1, Tit. 5, Quest. 4; and Lib. 8. Tit. 2, Quest. 8. Mahon, 1, p. 209.

the following:—"The uterus being found like a large flattened pouch, from nine to twelve inches long. Its cavity contains coagula or a bloody fluid, and its surface is covered by the remains of a decidua.* Often the marks of the attachment of the placenta are very visible; and this part is of a dark colour, so that the uterus is thought to be gangrenous by those who are not aware of the circumstance. The surface being cleaned, the sound substance of the womb is seen, and the vessels are observed to be extremely large and numerous. The fallopian tubes, round ligaments, and surface of the ovaria, are so vascular, that they have a purple colour; and the spot where the ovum escaped, is more vascular than the rest of the ovarian surface. This state of the uterine appendages continues until the womb returns to its unimpregnated state. A week after delivery, the womb is as large as two fists. At the end of a fortnight, it will be found almost six inches long, generally lying obliquely to one side. The inner surface is still bloody, and covered partially with a pulpy substance, like decidua. The muscularity is distinct, and the orbicular direction of the fibres round the orifice of the tubes very evident. The substance is whitish. The intestines have not yet assumed the same order as usual, but the distended cæcum is often more prominent than the rest. It is a month at least before the uterus returns to its natural state; but the os uteri rarely, if ever, closes to the same degree as in the virgin state."†

In a uterus which had contracted perfectly, an examination was made on the *second* day after delivery. It measured eight inches in length by four and three quarters in breadth, and three in the antero-posterior diameter. Its parietes were from one inch

* The decidua is sometimes produced in cases of difficult menstruation; and it is important to remember, that it may be mistaken for abortion. It resembles it in the pains, discharge of blood, &c. But the one presents an embryo, at various stages of increase—while in the other, that is altogether wanting. It seems now agreed, that the discharge of this membrane, (recognized by Dr. Baillie to be similar in structure to the decidua,) occurs frequently in unmarried females. It would appear to be generated spontaneously by the inner membrane lining the uterus. (Blundell's Lectures, Lancet, N. S. vol. 4, p. 577. Ashwell on Parturition, p. 119.)

† Burns' Midwifery, p. 326. The Dissections of Mr. Mayo, (quoted in London Medical Repository, vol. 21, p. 343,) and of Dr. Hewson, (North American Medical and Surgical Journal, vol. 9, p. 371,) of females dying immediately after delivery, corroborate the above statement. In both, the os tinæ was much dilated; being, in the former, when disposed in a circular form, about two inches in diameter. In Dr. Hewson's case, the uterus was about the size of a man's fist.

five lines to one inch in thickness, and its internal surface as well as its appendages corresponded to the description already given.

In another, where the woman died *sixteen* days after mature delivery, the uterus was five inches two lines in length, three inches eight lines in breadth, and its substance averaged in the body and fundus from seven to eight lines in thickness.

Dr. Montgomery, from whom I have taken these statements, adds that at the end of a week, the uterus has a length of between five and six inches, and after a fortnight does not exceed five inches: its vascularity is diminished, and the thickness of its parietes reduced about one third.*

In cases of abortion or premature delivery, but of course depending on the length of the period of gestation, the uterus will be found as small in a few days after delivery, as it would at the end of the same number of weeks after parturition at the full term.

John Hunter examined one of a female who poisoned herself about *one month* after impregnation. It was highly vascular, and covered on its internal surface with a pulpy substance, which was evidently coagulated blood. The cervix and os uteri were natural, but the body near the fundus was a little enlarged. Nothing like an embryo could be detected.†

Dr. Robert Lee mentions the following particulars of a dissection, in a case *two months* advanced. The uterus was double the size of one unimpregnated and was five inches long, three and a half in the greatest lateral direction, and two in the antero-posterior diameter.‡

In a uterus at the *sixth month*, examined by Dr. J. B. S. Jackson of Boston, the long axis measured nine and a half inches, and transversely at its broadest part, it was six inches. It was, on an average, three lines in thickness.§

In a case that occurred to Dr. Montgomery, death followed thirteen days after premature delivery in the *seventh month*. The uterus measured only three inches nine lines in length, by two

* Signs of Pregnancy, p. 315, 316.

† Transactions, Society for promoting Medical and Chirurgical Knowledge, vol. 2, p. 66.

‡ Medico-Chirurgical Transactions, vol. 17, p. 493.

§ Boston Med. Magazine, vol. 3, p. 580. The cord was eleven and a half inches long. The child, a female, measured eleven and a half inches, with fine down on the head, but the nails not formed.

inches nine lines in breadth, and its substance was from six to seven lines in thickness.*

To these it has been customary to add, with great confidence, the presence of a *corpus luteum* in the ovarium. As we shall have frequent occasion to refer to this peculiar body, it may be proper briefly to describe what is understood by it. The corpora lutea are oblong glandular bodies, of a dusky yellow colour. In the early stages of pregnancy, and for some time after delivery, they are extremely vascular, except at their centre, which is whitish; and in the middle of this white part is a cavity, from which the impregnated ovum is supposed to have proceeded.

* Signs of Pregnancy, p. 316.

The following measurements from Velpeau and Madame Boivin, may be useful in some cases:

Length of the unimpregnated uterus from the most salient point of the fundus to the end of the anterior lip of the neck, 26 lines, and from that to 28. (Velpeau.)

Length of neck, 13 lines.

Uterine walls, 5 lines in thickness.

Cervical walls, $3\frac{1}{2}$ to 4 lines, (2 to 3, Velpeau.)

Weight without appendages, 4.9 drachms, (Boivin,) 8 to 12 drachms, (Velpeau.)

Breadth of neck, $9\frac{1}{2}$ lines: thickness, 7 lines.

After several pregnancies.

Total length,	-	-	-	-	$2\frac{1}{2}$ to 3 inches;
Length of neck,	-	-	-	-	13 to 15 lines;
Length of body,	-	-	-	-	2 inches;
Breadth of neck,	-	-	-	-	18 lines;
Thickness of neck,	-	-	-	-	8 to 10 lines;
Thickness of uterine walls,	-	-	-	-	6 lines;
Weight,	-	-	-	-	$1\frac{1}{2}$ to 2 ounces.

(Velpeau's Midwifery, p. 61. Edin. Med. and Surg. Journal, v. 39, p. 210.)

"The virgin uterus (says Dr. Montgomery) is about two and a half inches long, $1\frac{1}{2}$ broad, and about an inch from back to front, with a cavity which would not more than receive into it the kernel of an almond. According to the calculations of Levret, its superficies may be taken at 16 inches, but at the end of the ninth month of gestation, its length is from 12 to 14 inches, its breadth from 9 to 10, and from back to front from 8 to 9 inches. Its superficies is now estimated at about 339 inches; and its cavity, which before was equivalent to $\frac{3}{4}$ of a cubic inch, will now contain 408, so that its capacity is increased a little more than 519 times, and its solid substance from $4\frac{1}{3}$ to 51 cubic inches, or nearly in the ratio of 12 to 1." The blood vessels also increase in size, while the uterine nerves have also been noticed by Wm. Hunter, Chaussier, and Tiedemann to enlarge during gestation. Signs of Pregnancy, p. 3. London Med. Repository, vol. 21, p. 167.

As I am on the appearances found after death, I may as well mention here, that Chaussier and others have, in a great number of observations, noticed a peculiar degree of thinning in the centre of the osseous plates of the bones of the ilium, as an indication of having borne children. (Dr. Granville, in Brande's Journal, vol. 20, p. 341.) Mr. Brookes, the celebrated anatomist, remarked, in a lecture before the London Zoological Society, that "an anatomist could always tell by the thinness of the ossa ilii, if the woman had ever been pregnant; and ascribed this to the pressure of the uterus producing absorption of their internal structure." Lancet, vol. 12, p. 133.

They gradually fade and wither : but there is no regularity as to the time of their disappearance.*

From the experiments of De Graaf and Haughton,† it seemed

* Burns, Denman. In the article on the Signs of Pregnancy and Delivery, by Dr. Montgomery, (*Cyclopaedia Practical Medicine*,) he states that he has found the corpus luteum distinctly visible five months after delivery at the full time, but not beyond that period; "and the corpus luteum of a preceding conception, is never to be found along with that of a more recent, when gestation has arrived at its full term; but in cases of miscarriage, repeated at short intervals, it may. At the time of delivery, the corpus luteum is neither so large, nor so vascular, as at the earlier periods of pregnancy, except the woman should happen at the time of her death to be labouring under inflammation of the uterine system." In a case of death five weeks after delivery, it was diminished about one half in size, was closer in its texture, and its colour becoming indistinct, but the radiated central cicatrix was quite obvious. Dr. Montgomery describes the corpora lutea as almost always *oval* in form.

The accompanying plates, from Davis' *Obstetric Medicine*, will give an idea of the appearance of these bodies. The first represents the external appearance of the ovarium; the second, the corpora lutea.



In a dissection at St. Bartholomew's, in Sept. 1837, of a female who had been delivered six months previous, the cicatrix of a corpus luteum was found on cutting into the left ovary. It was white and radiated, and surrounded with a dark grayish substance, passing between and marking the outlines of the rays of white. The reporter remarks that it almost precisely resembled that figured by Dr. Montgomery as found in the body of a female who had died five months after delivery. *London Med. Gazette*, vol. 21. p. 24.

† *Philosophical Transactions*, vol. 87, p. 159.

to be decidedly established, that their existence was a certain indication of previous impregnation; and such was the general belief of the profession. The causes of a more minute investigation on this point, and of the invalidity of this proof, will be best understood by the introduction of an important medico-legal case. I make no apology for its length, since it reviews, as it were, all that we have stated on the subject of delivery, and points out the difficulties that may occur in judicial investigations.

Charles Angus, Esq. of Liverpool, was, in September, 1808, tried at Lancaster for the murder of Miss Burns, a female residing in his house. The symptoms previous to her death, and the appearances observed on dissection, were such as to warrant a suspicion that she was poisoned. The medical examiners also found the uterine organs in such a state, as to lead them to declare, that in their opinion the deceased had been delivered, a short time before her death, of a fœtus, which had nearly arrived at maturity. Accordingly, on the trial, the medico-legal questions agitated were, 1. Whether Miss Burns had died from the effects of poison; and 2. *Whether she had been delivered of a child recently before her death?** I shall notice the first question in its proper place, and here confine myself to the second.

The testimony respecting her situation while living, appears to be contradictory. Before the coroner, the servants swore, that for some time previous to her death, she had increased very much in bulk, and had the appearance of a pregnant woman. Shortly before her death, the pain in her body was so severe, that she could not put her feet to the ground, and could scarcely bear to be touched; and she was occasionally observed to hold fast with her hands to the end of a sofa, on which she sat. These pains continued during the whole of Wednesday and Thursday, but on Friday morning (the day she died,) they had gone off; she appeared to be lighter, and was able to walk across the floor. She was also distressed during her illness with retention of urine. On the trial, the witnesses for the prosecution swore that she had every appearance of being pregnant, while those for the prisoner swore that for twelve months before her death, she had been very poorly, and had been irregular for some years—that she had a great difficulty in breathing, and complained that she was

* Mr. Angus was indicted on two counts—1. For poisoning Miss Burns; and 2. For administering poison (oil of savine) in order to procure an abortion.

much puffed and swelled, and was afraid of dropsy—that some weeks before her death, she was observed to be uncommonly flat bosomed, and not half so plump as she used to be in health, but swelled at the stomach—and that she had no appearance of being pregnant. Nothing satisfactory or conclusive can be drawn from these conflicting statements.

The appearances on dissection. The uterus was found so enlarged, as to be capable of containing nearly a quart of fluid. Before it was removed from the body, Mr. Hay, the surgeon, placed his left hand upon the fundus uteri, and introduced his right hand with the greatest ease into it, until the fingers of his right hand could be felt by those of the left through the fundus. The uterus being taken out of the body, an incision was made along its whole length, and its cavity laid open. The whole internal surface was bloody, and near the fundus there was a well defined circular space of a deeper colour than the rest, and about four inches and a half in diameter. This space was rough and rugged, and a small fragment of what appeared to be the placenta, still adhered to it; and the blood vessels opening upon it, were distinctly visible, and as large as a crow quill, whilst every other part of the internal surface was smooth. The walls of the uterus were about half an inch in thickness. There was no coagulum in it. The os uteri remained in so dilated a state, that the four fingers of a hand drawn together in the form of a cone, would pass through without in the slightest degree distending it. *Vagina ipsa admodum dilatata. Labia ejus fuerunt livida; et undique sanguine fœdata.*

The medical witnesses for the crown, (Drs. Gerard, Rutter, and Bostock, and Mr. Hay,) considered these appearances as conclusive in favour of her recent delivery; and they remark, that the enlargement of the uterine vessels within the boundaries of the placental mark, and the mark itself, were to them decisive—that mere enlargement of the cavity of the uterus, and dilatation of the os uteri, and even hæmorrhage might have been occasioned by other causes than pregnancy, as by dropsy; but no form of dropsy would occasion that mark, and no dropsy would explain the extraordinary enlargement and dilatation of the uterine vessels within that mark.

On the trial, however, Dr. Carson of Liverpool, being examined as a witness, objected to the above conclusions, for several rea-

sons. *The great dilated state of the uterus* was such, according to him, that if the mother had parted with a placenta, she must either have flooded to death, or the womb must have been gorged with coagulated blood. To this opinion, the testimony of Sir Charles M. Clarke, lecturer on midwifery in London, to whom the uterus was shown after the trial, may be opposed. "I have seen," says he, "uteri after the death of patients lately delivered, in whom, however, there was no hæmorrhage, which have been contracted in no greater degree than the uterus which is in the possession of Mr. Hay." Besides, it is evident, that the uterus had contracted, and was not at its maximum of dilatation; for if it could not contain more than a quart of fluid, it certainly could not, in that state, have contained a fœtus with its placenta and membranes.

Dr. Carson next intimated, that the appearances which were supposed to indicate the recent expulsion of a fœtus, might be explained, on the supposition that *dropsy of the hydatids* was the disease under which Miss Burns laboured. These hydatids, he observed, are attached by pediculi to the internal surface of the womb, and the action necessary to expel them, would cause a dilatation of the os uteri. He supposed also, that the vessels nourishing the hydatids might be so much smaller than those nourishing a fœtus, that in a state of undue dilatation, a flooding might not take place on their expulsion. When pressed with respect to the placental mark, he replied, that the attachment of these dropsical hydatids might have caused it.

I have already adverted to this subject in a previous chapter. I will add that Dr. Baillie never saw an example of hydatids of the uterus;* and Dr. Denman, although he admits their occasional occurrence, yet observes, that the other species is what is generally observed. A MS. extract from notes of Dr. William Hunter's lectures on the gravid uterus, delivered in 1765, gives the most minute account of these extraordinary productions. "I have seen," says he, "a placenta in the fourth month, all degenerating into hydatids. There are two kinds, one where the little hydatids are distinct and detached; the other, where they hang together in strings, like bunches of currants. This last sort is the most common in the uterus. They are most common in the

* Morbid Anatomy, 3d. ed. p. 376.

placenta, but they may be in other parts of the uterus. Sometimes there are vast heaps of them in the cavity of the uterus, and no remains of the placenta. I ventured, from seeing hydatids coming away from the uterus, to say that the woman was with child, because they most commonly attend the placenta. I have seen pails full of hydatids come away from the uterus with pains, the placenta and fœtus being thus converted."

There is little doubt, but that hydatids generally hang together like a bunch of currants, and are united by a common peduncle or footstalk. Should, however, the reverse be considered probable, it is difficult to conceive where the hydatids could have been placed as in this case, when the bases of the common footstalks alone extended over a space of four inches and a half in diameter. Three cases are related by Dr. Bostock, to whom they were communicated by Mr. Kendrick, surgeon at Warrington, of the disease under consideration, and in each of them, the medium of attachment to the uterus was a placenta, about *the size of half a crown*. I will repeat again in this place, what I have before endeavoured to prove, by a reference to the best authorities, that there is no case on record, where *hydatids of the uterus* have been formed *independent of sexual connexion*;* and again, should there be such a case, were the parietes of the uterus increased, or the os uteri enlarged, as in this instance?

The difference of opinion that was thus expressed by the medical witnesses, not only on this question, whether Miss Burns had been recently delivered, but also on the main accusation of poisoning, led to an acquittal. But I believe few can review this case, and not come to the conclusion, that she had really been pregnant. The charge of infanticide does not appear to have been made, and of course ought not, without the previous finding of an infant; but in every thing that relates to the verifying of sexual connexion and its consequences, and which in this instance must have been criminal, the proof seems to be complete. Even hydatids, as we have sufficiently shown, are to be considered, in a vast majority of cases, as indications of impregnation. If present in this instance, they should have been produced, or at least seen by some medical person.

It was not until after the trial, that the ovaria were examined.

They were then divided in the presence of a number of physicians, and a *corpus luteum* distinctly perceived in one of them. Mr. Hay took the uterus and its appendages to London, and showed it to the most eminent practitioners there. He received certificates from Drs. Denman and Haighton, Messrs. Henry Cline, Charles M. Clarke, Astley Cooper, and Abernethy, all stating, that it exhibited appearances that could alone be explained on the idea of an advanced state of pregnancy. And it appears to have been universally allowed, that the discovery of the *corpus luteum* proved the fact beyond a doubt.*

Subsequently, however, to this time, Sir Everard Home investigated the subject, and asserted that the corpora lutea may be present without impregnation. He examined the ovaria of several women who had died virgins, and in whom the hymen was too perfect to admit of the possibility of impregnation; and found that there were not only distinct corpora lutea, but also small cavities round the edge of the ovarium, left by the ova that had passed out at some former period. It is therefore supposed that the excitement of the ovaries from passion alone may be sufficient to rupture the vessels, and produce corpora lutea; and this is strengthened by the corpora lutea having been found in the female quadruped, after a state of periodical lasciviousness, where no copulation had taken place.†

Dr. Blundell, states that there are two kinds of bodies found in the ovaries—one fabiform, and the other spheroid. The first, when divided, have a shallow cavity; and it is these alone which constitute what we call *corpora lutea*. “The latter *may* be produced by impregnation; but at present, to some it may appear that they are rather the consequences of incipient disease, than of

* The facts from which the above case has been prepared, are drawn from a review of the trial of Mr. Angus, and the pamphlets to which it gave rise, in the Edinburgh Medical and Surgical Journal, vol. 5, p. 220; also a pamphlet entitled “A vindication of the opinions delivered in evidence by the medical witnesses for the crown, on a late trial at Lancaster for murder—Liverpool, 1808.”—This masterly production is from the pen of Dr. Rutter, to whom I must apologize for having attributed it to another. The quotation from Dr. Hunter’s Lectures, and the cases of Mr. Kendrick, are taken from it. I am also indebted for some hints to the London Medical and Physical Journal, vol. 21; and the Edinburgh Annual Register, vol. 1, part 2, p. 188. I may add in this place, that a rude but instructive plate of hydatids, formed like bunches of currants, is contained in Stalpart, vol. 1, p. 302.

† Denman, p. 119. Smith, p. 489. Blumenbach would, however, seem to have been the first who decidedly maintained that, under certain circumstances, a corpus luteum may be produced without sexual connexion. (Bostock’s Physiology, vol. 3, p. 29. Elliotson’s Blumenbach, p. 468.)

fruitful intercourse." And again of the fabiform bodies, the larger only deserve notice; they should be as large as a split pea. In the case of a female aged seventeen, who died of chorea, and in whom the hymen, which nearly closed the entrance of the vagina, was unbroken, there were no less than four corpora lutea; the largest, however, was a little bigger than a mustard seed. Dr. Blundell hence concludes, that "the fabiform corpus luteum with asterical cavity, of a yellow colour, large as a pea or larger, and seated beneath a cicatrix formed on the corresponding surface of the ovary, may be looked upon, in the present state of our knowledge, as a strong presumptive proof of impregnation; adding, however, at the same time, that I conceive a jury ought to be cautious of giving too much weight even to this evidence, when human life is at stake."*

It is proper here to add, that Sir Everard Home supposed that impregnation was necessary to the *expulsion of the ova*; and Mr. Stanley corroborates this idea, by expressing a doubt whether the effect of the excitement on the ovary of the virgin can extend beyond the rupture of the vesicle, and the production of the corpus luteum. It seems to be conceded that it is smaller, and not marked by the extensive vascularity of the contiguous parts of the ovarium.†

A late writer, however, (Prof. Montgomery of Dublin,) decidedly controverts these statements. After noticing the remarks of Blumenbach and Meckel, and endeavouring to show that it is merely an opinion on their part that corpora lutea may occur independent of conception, and that they do not seem to have seen any instances, he refers to the decisive experiments and opinions of Dr. Haighton, who observed, in his paper read be-

* Blundell's Lectures, Lancet. N. S. vol. 4, p. 229. Medico-Chirurgical Transactions, vol. 10, p. 263. Dr. B. divided the uterus in rabbits, and allowed it to heal, so that at the line of division, the canal of the uterus became shut up: In other instances, he made an incision through the vagina. The rabbits admitted the male: In both cases the wombs were evolved; *corpora lutea* were formed, but no *fœtuses*. (Lectures, Ibid. vol. 3, p. 258.)

Dr. John K. Mitchell, in his experiments on rabbits, obtained similar results, although he suggests the possibility of corpora lutea being a proof of intercourse merely. (Chapman's Journal, N. S. vol. 5, p. 256.)

† Transactions of the College of Physicians of London, vol. 6, p. 425. Sir E. Home dissected a female who had been impregnated a week before death. The ovum was found in the uterus, enveloped in coagulated lymph. Two corpora lutea were observable, and there were several cavities from which ova had previously made their escape. The os tincæ was closed with a thick jelly; but the opening to the fallopian tubes was pervious. (Annals, vol. 9, p. 468; and vol. 11, p. 54.)

fore the Royal Society, that "no corpora lutea exist in virgin animals; and that whenever they are found, they furnish incontestable proof that impregnation either does exist, or has preceded." He adds, that he has seen several of these *virgin lutea*, as they are unhappily called, and has preserved several specimens of them. They differ, according to him, from those of impregnation, in the following particulars: 1. There is no prominence or enlargement of the ovary over them. 2. The external cicatrix is wanting. 3. There are often several of them in both ovaries, especially in patients who have died of tubercular diseases. 4. They are not vascular, and cannot be injected. 5. Their texture is feeble—never presenting the soft and glandular appearance so characteristic of the real: And 6. They have neither the central cavity, nor the radiated cicatrix which results from its closure.*

It is hardly necessary to add, that Dr. Montgomery is a firm believer in the presence of a true corpus luteum being the product of conception.†

I have endeavoured, in several parts of this chapter, to inculcate the idea, that medical examiners should, in disputed cases, limit their opinion to the fact, *whether evidences of conception are present or not*. The law is so constituted, that nothing further is required of them on this point. *An infant must be found, in order to bring the charge of infanticide*; and in all other instances, it will be sufficient if we prove previous sexual connexion, whether the product has been an organized fœtus or not. The following case is calculated to enforce the necessity of confining our opinion to this fact.

* Cyclopedia of Practical Medicine, *ut antea*. It is evident that the common opinion is incorrect, that the number of children which a female has had, can be ascertained by the number of corpora lutea in the ovary.

† The following note of Dr. Dunlop, published in the second edition,—

"A recent case has, in my opinion, completely overthrown the theory that even strong passions are necessary to the formation of the corpora lutea. My friend Dr. Mackintosh, Lecturer on Midwifery in Edinburgh, has in his museum a preparation taken from the body of a child, which he, in company with Dr. John Scott, dissected at Pierceshill Barracks. The subject was not above five years old, and the hymen of course was entire. She died of tubercular disease in the lungs; yet in her ovaries were numerous *corpora lutea*, as distinct as I ever saw them in the adult unimpregnated female." DUNLOP. * * * * * — is thus dismissed by Dr. Montgomery: "The only comment necessary to make on this statement, is simply to remark, that *one* real corpus luteum, as it is found in the 'adult impregnated female,' is fully as large, or even larger than the ovary of a child five years old; therefore it is *impossible* that there could in such a case be several of them."

Mrs. Cunningham, aged twenty-four, and the mother of three children, considered herself nearly four months advanced in pregnancy, when the rudeness of a licentious person required her to make a violent exertion. On the succeeding day, she perceived a slight discharge of blood from the vagina, which ceased in about twenty-four hours. A day thereafter, it returned with increase, and continued (gradually diminishing) for three days. All this time, she suffered no pain, nor was she prevented from managing her domestic affairs. There was a slight tenderness of the abdomen only. At the conclusion of the time last mentioned, she was seized with pains resembling those of parturition, and accompanied with a profuse hæmorrhage. Mr. Lemon, a surgeon, was called, and on examining *per vaginam*, he found the os uteri dilated to the extent of half a crown, and a bag protruding through it. A fleshy cake, three inches in diameter, possessing every character of a natural placenta, and having a membranous bag connected with it, was shortly thereafter expelled. The shape of this mass was oblong. On cutting into the bag, which was flaccid, the contents gave an appearance similar to what is presented on the exposure of the abdominal and thoracic viscera of a very young fœtus. But the expansion of the placenta rendered the nature of the appearance evident. Its whole surface was covered with tumours. There were about twenty-one distinct, besides many inconsiderable ones, of various size, shape and colour, and some in clusters, all seemingly connected together by veins. The largest tumour was equal in magnitude to a small walnut. Some were of a livid colour, others fleshy brown, and two or three light yellow. The livid ones had generally condensed fat at the extremity; and they, as well as the brownish, contained coagulated blood.

The woman, during the growth of this mass in the womb, had every symptom of pregnancy—nausea, capricious appetite, enlargement of the breasts, prominent firmness of the abdomen, and a cessation of the menses. She had not, however, felt any actual motion.

Mr. Lemon remarks, that if this female had died from hæmorrhage, and her death been made a subject of legal investigation, the womb would probably have exhibited all the proofs of impregnation. Even the *placental mark* would have been pre-

sent, and yet no fœtus, or umbilical cord was formed in this instance.

The observations of the editors of the journal from which this case is taken, are a satisfactory commentary on it. This mass was evidently the product of conception and impregnation. The whole catalogue of symptoms tends to prove it, and the only circumstance against it, is the absence of a fœtus and umbilical cord. "But this furnishes no conclusive argument, as there are innumerable instances of fœtuses so exceedingly imperfect, that their nature can scarcely be recognized; and with a still more imperfect organization, they degenerate into a mass like the present."* The *placental mark*, then, in this instance, would have been a satisfactory proof of conception.

II. *Of some medico-legal questions connected with the subject of delivery.*

1. *Can a woman be delivered without being conscious of it?*

This question must be answered in the negative, with, however, some exceptions. Delivery is undoubtedly to a certain degree independent of the will, and there may hence be certain situations in which it will take place without the female's knowledge. The administration of narcotic substances may cause such a state; as in the instance, in 1641, of the Countess de Saint Geran, who was plunged into a deep sleep by a narcotic beverage, and during it, was delivered of a boy. In the morning she awoke, and found herself bathed in blood, and the infant gone. Her relations had suborned individuals to remove it, in order to deprive her of the pecuniary advantages of her situation.† There is also a class of diseases commonly called comatose, and accompanied either with or without fever, during the operation of which, delivery may take place without the female's knowledge. Hippocrates mentions a case, in a woman eight months advanced, who, on the fifth day of a typhoid fever, accompanied with coma, fell into labour, and was delivered without being conscious of it. I will only add to these, the account given by Dr. Hoyer,

* Edinburgh Medical and Surgical Journal, vol. 11, p. 96. "Case in which a mass, resembling a placenta without a fœtus, was discharged from the womb. By M. Lemon, member of the Royal College of Surgeons, London." With observations by the editor.

† Foderé, vol. 2, p. 10, from the *Causes Celebres*. The authors of this crime were discovered, and the child was restored to its rights, in June, 1666.

of Mulhausen, of a female dying in labour, who was put on the bier for interment, and while there, an infant was suddenly born.*

These examples prove that it is possible for a woman to be delivered without being conscious of it; but they at the same time show, that if some extraordinary and striking cause do not intervene, the assertion is to be disbelieved. The early pains of pregnancy may be mistaken for those of colic†—flooding may commence during sleep; but it is hardly credible that the whole process of labour and delivery may be gone through by a healthy woman, and of sound mind, without her being aware of it.‡

2. *Can a woman, if alone and without assistance, prevent her child from perishing after delivery?* This is a most important question, and deserves our serious consideration, from its bearing on the subject of infanticide.

There are undoubtedly many cases, in which an unassisted

* Ibid. p. 11. Mr. Shaw, in his Essay on Partial Paralysis, quotes the following case from Dr. Cheyne's Essay on Apoplexy. "A woman was attacked with apoplexy, and lay hemiplegic for two days—at the end of which time, she was delivered of a living child, the uterus contracting in the most perfect manner, so as to expel the fœtus and secundines, and then contracting regularly, so that the flooding which might have been anticipated, did not take place." (Journal Foreign Medicine, vol. 3, p. 20.)

Dr. Montgomery cites several cases of delivery occurring during sleep. They are all cases of females who had had children previously, and in whom it is probable that a single pain was sufficient.

† "While lecturing on the subject of concealment of pregnancy, in the winter of 1823-4, I received the following extraordinary case, from my friend, Mr. M'Intosh. 'I was consulted about a married lady, in the spring of 1822, who was supposed to be in a very bad state of health. She had been attended by Dr. —, and treated for an affection of the spine and dropsy. The husband of the lady grew impatient, as she became daily worse, and the abdomen more and more distended. He sent for the family surgeon, who suspected it might be pregnancy, attended with peculiar nervous irritability, and recommended that I should be called in to examine more particularly. Accordingly I waited on her, and as she sat on her chair, the nature of the case became perfectly clear, as I distinctly perceived the motion of the fœtus. This I mentioned, but the lady scouted the idea. I warned her to get baby linen and dresses ready, which she did not do, so convinced was she that she was not pregnant. In six weeks afterwards, I was suddenly called and found the patient in labour; and to demonstrate in the clearest point of view, that she had not believed that she was in the family way, no nurse was engaged, nor had any thing in the shape of dress been prepared for the child. I told her she was now in labour, but she would not believe me. Upon examination, I found the os uteri open, the membranes protruding, and I distinctly felt the head of the child. The waters broke; still she would not believe. The pains increased, the head of the child was born, but she would not credit her actual situation, till she heard the child cry and it was put into her arms. Both mother and child did well; and I am engaged to attend the mother a second time in November, 1823.' " DUNLOP.

‡ Foderé, vol. 2, p. 10. Capuron, p. 129. Dr. Asa B. Brown, of Somerset, Niagara county, kindly transmitted to me a case which occurred to him in 1830. The female was in labour with her first child, and was seized with puerperal convulsions. It was deemed absolutely necessary to deliver her, and this was accordingly done. After her recovery, she stated to Dr. Brown, that she had not any knowledge of the birth of her child.

female will be unable to prevent the death of her infant. Among these, may be mentioned, very rapid and early delivery. Instances of this nature occur to all accoucheurs, and Foderé relates of his own wife, that a single pain brought forth the child. Such is the conformation of the pelvis, and so powerful the action of the womb, that the membranes and fœtus are expelled together. Now a female taken thus, might be unable to prevent the child from falling, and its death would ensue, if she remained unassisted.* Such a state of the parts is, however, very uncommon in a first delivery,† and this is the one that commonly is considered in cases of infanticide. If a woman has, in a previous labour, experienced so rapid a parturition, it is her duty to guard against its consequences, when a second is impending. Another possible circumstance is, that a woman may be taken in labour and delivered while passing her fœces. The pressure of the uterus in the latter days of pregnancy, produces an inclination of this kind, and even during labour it is very common.‡

* Dr. Hunter mentions a case where the female was seized during the night, and the child was born before he arrived. She held herself in one posture, to prevent the child from being stifled, but although it had cried, yet on the arrival of Dr. Hunter, it was found dead, lying on its face and covered with blood.

Dr. Ramsbotham, (Lectures in London Medical Gazette, vol. 13,) also mentions cases of rapid delivery, and where the child was with great difficulty saved.

The following are fortunate cases :

"The following case I had from Dr. Marshall. The wife of a bombardier of artillery, while stepping out of her bed, in the ninth month of her pregnancy, dropped the child on the floor. She had no warning of her approaching labour, and luckily the child was unhurt.

Another case I should be afraid to state, but that I had it from a gentleman of unquestionable veracity. "The wife of an officer of a Scotch Militia Regiment had long been married without having a child. One day, while bathing her feet in her bed-room, her servant heard the cries of a child; she rushed into the room and found her mistress lying back in her chair in a swoon, and a new-born infant struggling in the tub at her feet. She raised the child, and both it and the mother did well. In this case, neither the lady nor her husband had the slightest suspicion that she was pregnant." DUNLOP.

† Mahon, vol. 2, p. 381.

‡ I apprehend that it is as frequent with cases of this description, to furnish matter for keen discussion, as to the guilt or innocence of the female, as with any that I have mentioned. An anonymous correspondent of the London Medical and Physical Journal, (vol. 8, p. 448,) mentions the instance of a lady, who being attacked with diarrhœa towards the close of pregnancy, was one day seized on the night-stool with a labour pain, and in a short time brought forth a child, before she was able to rise and give the alarm. He was immediately sent for, and rescued both mother and child from their perilous situation. He adds, that if the female had gone to the common privy, it would have been fatal to the child. But in this case, the lady was above suspicion—not so with an unmarried, seduced female. The remark of the Editors of the Edinburgh Medical and Surgical Journal, answers the argument to be drawn from such unexpected occurrences. "So sudden a delivery can only happen to a person who has borne children before." (Vol. 19, p. 454.) But is it not possible for a similar case to happen with a first child? If so, it must have its full weight in cases of infanticide. Dr. Davis gives us the following narrative:—

But delivery in this position may not only be fatal to the child, but very injurious to the mother, by tearing off the umbilical cord, or inverting the uterus. Delivery may also be attended with hæmorrhage, and consequent debility, or with fainting or convulsions, and the female be unable to assist her offspring. These are cases which do not often occur, and when they do, they leave traces sufficiently evident—paleness, swoonings, the state of the pulse, and of the infant.* A fourth case is, when the mother being alone, and the child having its face to the sacrum, is delivered with it downwards. In this position it cannot breathe, unless it be turned: and it is well known, that the slightest substances impeding respiration in a new-born infant, such indeed as a portion of the bed clothes, or a piece of wet linen, will destroy it.

There are also some infants so weak at birth, that they require the warm bath, rubbing with stimulant applications, &c. in order to preserve their life. An unassisted mother cannot of course save these. It has also been suggested, that the female may be suddenly delivered while in a standing posture, and the infant falling, may be found with a fractured skull. In such a case, however, we should look for a rupture of the cord, and a violent hæmorrhage consequent on a forcing away of the placenta.† The cord may also be wound round the neck, and thus prevent respiration.

Lastly, the infant may perish, and the mother not be able to prevent, when the umbilical cord has not been tied after being cut, broken or torn. The first of these, however, is such a proof of presence of mind, that we may justly be distrustful, if she de-

Dr. Haighton in his Lectures on Midwifery, related the case of a female at the full period of gestation, who was seized with a sudden and pressing call. Living in the country, she hastened to the garden. The pit or cess pool of the vault was large and deep. On being seated, a violent paturient effort took place, and the child was suddenly expelled. It fell and was swallowed up by the filth below. "Circumstances immediately transpired, which led to the arrest of the unhappy young woman, and she was sent to York Castle to take her trial. The medical practitioner of the family in which she was servant, was subpoenaed as a witness, and swore that it was perfectly possible for women in labour to distinguish, and that in fact they always did know, the difference between the bearing down pains of parturition and the calls of nature, however pressing or painful, to empty the contents of the rectum. On this most incompetent and criminally ignorant evidence, the unfortunate prisoner was found guilty of the crime of infanticide and executed." (Davis' Obstetric Medicine, p. 24.)

* Mahon, vol. 2. p. 383.

† Smith, p. 370.

nies being afterwards unable to tie it.* It may be broken and torn, as we have already stated, by the weight of the infant, and the mother be unable to save it. There are, however, instances, in which the mother and the heroine are admirably combined. The wife of a goldsmith at Marseilles, was seized in labour while walking her room. The infant fell, and the cord broke. She took it up and called for assistance, but was not heard. Finding that it was losing blood by the cord, she compressed it with her fingers, and held it so for two hours, when she was found fainting. Her life, however, and that of the child were both preserved.†

These are the exceptions to the general doctrine that may be laid down in such cases, viz: *That every woman is more or less acquainted with the time when she is to be in labour, and that it is her duty never to be so far alone as to render assistance accidental.* Even during labour, the vast majority of females make known their situation by their pains; and they will only be suppressed by those in whom shame and the fear of dishonour are predominant passions. And it is a question of moment, whether we should feel that sympathy for this sense of shame, which some authors,

* The following remarkable case shows that it is possible for the division of the funis to "occur in such circumstances as to imitate precisely, the effects of criminal violence, inflicted after delivery." Mr. Chamberlayne of London relates of a patient of his, who was taken so suddenly in labour, that the child shot forth from her with such force as to separate the funis, which broke exactly in the right place, and as even as if it had been cut with scissors; not so much as one drop of blood followed, although the child was strong and very lively. (London Med. and Phys. Journal, vol. 7, p. 284.)

M. Meirieu relates the case of a female walking in her room, who was suddenly seized with labour pains. She took firm hold of the bed-post, brought herself nearer to the ground, retained the infant by means of her clothes, and placed it on the floor. The whole was the affair of an instant. On examining the child no trace of contusion could be found, but the umbilical cord was broken at about four inches from the ring, and the end drawn out to a point. (Quarterly Journal of Foreign Medicine and Surgery, vol. 5, p. 634.)

† Foderé, vol. 2, p. 31. The following extract from a late writer on law, is directly applicable to the question considered above. "One thing is very remarkable, and occurs in most cases of concealment and child murder, viz: the strength and capability for exertion evinced by women in the inferior ranks shortly after child-birth—appearances so totally different from those exhibited in the higher orders, that to persons acquainted only with cases among the latter, they would appear incredible. A mother, two or three days after delivery, walked twenty-eight miles in a single day with her child on her back. In the case of A. Macdougall, 1823, it appeared that she was sleeping in a bed with two other servants, but rose, was delivered and returned to bed without any of them being conscious of what had occurred. Many respectable medical practitioners, judging from what they have observed among the higher ranks, would pronounce such facts impossible, but they occur so frequently among the labouring classes as to form a point worthy of knowledge in criminal jurisprudence." (Alison's Principles of Criminal Law of Scotland, p. 161.)

and particularly Dr. William Hunter, have inculcated in their writings. It is, at all events, misplaced as to time: and the female who destroys a human being, and her own offspring, to escape its effects, should have felt its influence at an earlier period. "To the moral and political philosopher, Dr. Hunter may appear to have exalted *the sense of shame into the principle of virtue*, and to have mistaken the great end of penal law, which is not vengeance, but the prevention of crimes."* It is not necessary, however, to enlarge on this point. Circumstantial evidence generally guides in the preliminary decision of it, when accusations of infanticide are made; and great stress is properly laid, in disputed cases, on the incidents of time and place, and of situation and character.†

PART II.

Delivery, as it respects the child, may become a subject of importance, both in civil and criminal cases; and instances are frequently occurring, in which the utility of properly understanding its phenomena is clearly manifested. The arrangement proposed, was to notice,

I. *The signs of the death of the child before or during delivery.*

This subject may be agitated in civil cases, where the succession to an inheritance is questioned; or in criminal ones, as when a pregnant woman is maltreated, and her offspring is supposed to have died from the injury.‡ It is, however, of the greatest importance, from its bearing on the two great medico-legal subjects of Abortion and Infanticide; and I shall notice it at this time as an introduction to them.

During pregnancy, the life of the fœtus is inferred, from the

* Percival's Medical Ethics, p. 84.

† On this question, see Foderé, vol. 2, p. 25; Capuron, p. 131; Smith, p. 365 to 377; Mahon, vol. 3, p. 381, &c. Cases of sudden delivery are noticed by most obstetrical writers, and in many periodicals. I will only add a few to those already cited. Two cases by Mr. Tatham. (London Medical Repository, vol. 21, p. 287.)

One of these was with a second child, and *not with a first*, as it is incorrectly stated in Medico-Chirurgical Review, vol. 5, p. 237.

Cases by Mr. Thomas. London Medical and Physical Journal, vol. 52, p. 353.) Blundell's Lectures. (Lancet, N. S. vol. 1, p. 116.)—Davis, Ryan, &c. &c.

‡ As in the following case given by Dr. Kennedy, (p. 208.) A woman in the seventh month, was sent to the Lying-in Hospital, Dublin, to be examined whether her child was, as she asserted, killed in the womb by certain blows and injuries inflicted upon her by a female with whom she had a scuffle. She described very accurately all the reputed proofs of the child's death as being present. When, however, the stethoscope was applied, the fetal heart's action was distinctly audible; and the announcement of the child's being alive dissipated all her hopes of legal vengeance, as she appeared to calculate upon hanging her antagonist at least.

good health of the mother; the progressive increase of the abdomen in size, and the motion of the fœtus being experienced. These form strong presumptive evidence, but there are exceptions to all of them. Healthy females may bring forth dead children, while sickly ones have produced living children. The increase of the abdomen also may be owing to a mole, or to dropsy; while the irregularities that are experienced respecting the motion of the fœtus, are sufficient to render it very uncertain. In many cases, the mother has imagined that she felt life to the moment of the delivery of a dead child; while, on the contrary, I need hardly add, no motion, or a very slight one, has been experienced for a considerable time previous to the most favourable labours.

The same uncertainty attends the proofs of life during delivery. The limpidity of the waters—the regularity of the pains, and their gradual increase in strength—the pulsation of the heart and umbilical cord of the fœtus; or, if it is not practicable to ascertain these last, the pulsation at the anterior fontanelle—and the swelling, tension, and elasticity of the presenting part, together form an incontestable chain of evidence in favour of its presence. Separately, however, they are susceptible of doubt. The two first are uncertain; it may be impracticable to ascertain the third; the occurrence of the fourth is denied by some authors, and it may be wanting in children who are apoplectic or feeble, and who notwithstanding have recovered after birth.* The last is a very favourable sign; but death may ensue during delivery, and the congestion induced by the detention in utero, preserve it.

In investigating, on the other hand, the signs of the death of the fœtus, we must refer, in the first place, to the causes that may have induced it. As to the mother, these are numerous. The unhealthiness of her habitation; the mode of dress; the want of food, or improper use of it; violent exercise; too great labour; violent passions of the mind, either of the exciting or depressing kind; venereal excess; intemperance; diseases, such as hæmorrhage or convulsions; contagious disorders, such as syphilis or smallpox; falls, wounds, and accidents generally; any inordinate evacuation—and indeed all the causes of abortion, as enumerated by authors, may have produced the death of the infant.

* It can, of course, only be ascertained when there is a natural presentation, and hence is not always applicable.

The child may also be destroyed during labour, from that process being long protracted; from its being so difficult as to require instruments, or complicated with syncope, convulsions or hæmorrhage; from a morbid state of the placenta, or a twisting of the umbilical cord around its neck.

It is hardly necessary to add, that fatal as each of these causes have respectively been at various times, yet children have often survived in spite of them.

The signs experienced during pregnancy, of the death of the fœtus, are a want of motion in the child—the womb feels as if it contained a dead weight, which follows the direction of the body as it moves to one side or the other; the navel is less prominent; the milk recedes, and the breasts become flaccid; the mother feels a sense of lassitude and coldness, accompanied with head-ach and nausea.* As equivocal signs, may be added, a paleness of the face; the eyelids having a livid circle around them; the presence of a slow fever and melancholy, and a fœtid breath.

These, if all present, form a strong presumption in favour of the destruction of the offspring. Individually, however, they are liable to be mistaken or confounded. Subsidence of the tumour is one of the natural changes that in all cases precede labour. The breasts also do not enlarge in some until advanced pregnancy, and of course we cannot draw an inference from their state. But particularly as to the motion of the child, may error arise. The want of it cannot be regarded as a certain proof of death; and the mother may mistake, and indeed often has mistaken, action of the abdominal muscles, spasm of the uterus, and even hysteria, for it.†

Again, the fœtus may die, and be retained in the uterus, without exciting any general or local disturbance. The health will be good, and there is nothing on which to found a suspicion, ex-

* Mr. Travers in his "Further Inquiry concerning Constitutional Irritation" says that "if the child dies at the seventh month—from the period of its death, though the woman be not delivered for days after, the breasts are furnished in the same plenitude as if the child was born and alive. This is directly contrary to what writers on midwifery have asserted, viz., that the falling of the breasts and the failure of the milk are never-failing signs of the child's death." *British and Foreign Med. Review*, vol. 2, p. 8.

† Kennedy, p. 210.

cept the suspension of the ordinary proofs of progressive pregnancy.*

Under such circumstances, the importance of AUSCULTATION in proving the life of the fœtus, is strikingly shown. If we can detect by it a distinct fœtal heart, with or without the placental sound, there can be no doubt. It is to be regretted that the reverse is not so certain. It requires familiarity with the stethoscope, frequent examination during the child's life, and attention to the various doubtful circumstances to which we have alluded in a previous chapter, to authorize a decisive opinion. The cases, however, are multiplying, where those who are acquainted practically with auscultation have predicted correctly; and in proof of this, I need only refer to the work of Dr. Kennedy which I have repeatedly quoted. I will only add, that in some cases, the placental *souffle* continues after the fœtus is dead; but it is described to be more abrupt, of shorter continuance, wanting its protracted terminating whiz, and generally confined to a circumscribed spot.

If actually dead, and long detained in the uterus, putrefaction takes place; the membranes lose their vitality, and blackish fœtid discharges shortly occur: This is also a rule, subject to exceptions. We have seen, when noticing the subject of superfœtation, that the dead ovum may remain for months without exhibiting any marks of putrefaction. It is much rarer to notice this, when the uterus contains only a single fœtus.†

The signs during the progress of delivery, of the death of the

* Ramsbotham. (Medico-Chirurgical Review, vol. 21, p. 309.)

† The length of time during which a dead fœtus may be retained in utero, is uncertain: the usual period is from one to three weeks. Dr. Blundell says, "When the ovum dies in the earlier months, it may be retained till the close of pregnancy."—(Medico-Chirurgical Review, vol. 21, p. 343.)

Dr. Porter, of New London, relates a case of this nature, where at the fifth month the abdomen gradually diminished, and at the eighth was scarcely more prominent than ordinary. There could, however, be perceived a foreign body in the uterus on examination. The breasts were distended and there was an occasional oozing of milk; but this disappeared about the ninth month, and the breasts diminished. The general health was good. At the usual period of utero-gestation, without pain or much effort, the membranes protruded, and were finally expelled with cramps and severe hæmorrhage. Enveloped in the broken membranes, was a fœtus of about five months, and free from any marks of decomposition. The placenta resembled in form and consistence a sarcomatous tumour. Amer. Journal of Med. Sciences, vol. 17, p. 347. A somewhat similar case, by Dr. Galbiati of Naples, is given in the same Journal, vol. 18, p. 523; and a precisely similar one by Dr. Hays, of a fœtus of five months, retained until the full time, and expelled entirely free from putrefaction. Ibid. vol. 20, p. 535. While two cases of fœtuses putrefying in utero, by Dr. Vassal of Paris, are related in Ibid. vol. 17, p. 528.

fœtus, are similar in some respects to those already mentioned; such as the absence of motion, and fœtid discharges. Writers have also mentioned the state of the presenting part. When the fœtus is dead, it has an œdematous or emphysematous feel; the skin is soft, and easily torn; and the bones of the cranium lose their natural connexion, and vacillate on one another. The umbilical cord also, if it can be examined, is found without pulsation, and in some advanced cases, withered and rotten.

Although these are proofs, yet the practitioner should not hastily pronounce on them. The fœtid discharges or odour may be owing to the premature passage of the meconium, or to the mixture of a small quantity of blood with the uterine discharge. The former of these was at one time supposed to indicate death with certainty; but it is now ascertained, that although it portends danger, yet children have notwithstanding been born strong and healthy.* The state of the skin and bones may be the effect of weakness, as also the looseness of the epidermis. Even its livid colour is not infallible. Vicq-D'Azyr mentions a case that occurred at Breslaw, where the arm of the infant protruded from the uterus, and was so cold and livid that it was deemed gangrenous, and was amputated. Notwithstanding this, the infant was born alive three days after.†

Dr. Blundell, a very eminent man in his particular branch of medicine, after reviewing the various signs, conceives that none should be relied on, except the three following:—*The cuticle coming away from the head in large flakes*, desquamating, as from dead bodies in the lecture-room. This is very strong presump-

* "We may, however, in general conclude, when the meconium does come away in a natural presentation, that the state of the child is not without danger; and for many years, I never saw a child, presenting with the head, born living, when the meconium had come away more than seven hours before its birth. But at length I met with a case, in which the meconium was discharged for more than thirty hours; at the end of which time, though the woman was delivered with the forceps, the child was born healthy and strong. And since that time, I have had many equally convincing proofs, that the coming away of the meconium is a very doubtful sign of the death or dangerous state of the infant, whatever may be the presentation." (Denman, p. 395.) See also Belloc, p. 91. Capuron, p. 247. Burns's Mid. Note to chap. 7.

† Foderé, vol. 2, p. 91. Baudelocque (vol. 3, p. 161,) relates a case, where the woman was two days in labour; the scalp of the child was loose, pendant, and in a manner rotten: the cuticle and hair came away, and adhered to the finger. No motion had been felt for twenty-four hours; and yet on delivery with the forceps, the child was living and healthy, except a superficial gangrenous scalp on the crown of the head, which soon healed.—A case strongly indicative of the fœtus being in a putrid state previous to birth, but where it was born alive and survived, is related by Prof. Nagele, Lancet, N. S. vol. 2, p. 70.

tive proof of death, although even not demonstrative, for cases have been related, and among the rest, one by Dr. Orme, in which the cuticle had separated, in consequence of cutaneous disease, and the child was notwithstanding alive. "So rare, however," he adds, "are these cases, that I should feel disposed in practice to look upon them as of no account, were it not that human life is at stake." *The bones of the cranium being detached from each other, and floating, as it were, in the mollified brain.* Let it be recollected, that mere displacement and solution of union, is insufficient. They must be detached and afloat. Thirdly *the umbilical cord* (if it can be felt) cold, brown, flaccid, and destitute of pulsation for half an hour or an hour. This last, discriminates between the temporary loss of pulsation, occurring in a recent descent.*

We must recollect also, that the pressure occasioned by a long and tedious delivery, may extinguish life. The proofs, now enumerated, indicative of putrefaction, will, in that case, generally be wanting. The motion of the fœtus, which has lately been felt, will suddenly cease, and tumefaction and redness of the presenting part will be observed. Ecchymosis sometimes occurs, owing to a rupture of the vessels, and an effusion of blood into the adjacent cellular tissue.

The application of the stethoscope will tend to diminish the number of doubtful cases. It is, evidently, as valuable here, as in any inquiry in which we have before recommended it.†

If the medical examiner be called immediately after birth, he can have no difficulty in deciding on this question. The body will be found to have lost its firmness and consistence—the flesh will be soft, and the muscles easily torn—the skin will exhibit marks of putrefaction, and will be of a purplish or brownish red colour—the epidermis is raised, and may be easily separated—a bloody serum is often effused in the cellular tissue and beneath the skin, especially about the cranium, and sometimes a similar effusion is observed in the cavities of the chest and abdomen, and their viscera are of a deep reddish hue. The umbilical cord is livid, soft, and easily torn. The cranium and thorax are flattened, and the membranes uniting the bones of the head are much

* Blundell's Lectures on Midwifery, Lancet N. S. vol. 2, p. 161.

† See Dr. Kennedy's Work, p. 242 to 258.

relaxed, so that the bones are somewhat disunited—the brain also is almost fluid, and has a fœtid odour.

It will readily occur, from a review of the remarks contained in this section, that the fact of the death of the fœtus before or during delivery, can be ascertained with considerable facility, if the practitioner be called at the proper season. Unfortunately, however, in most cases which come before a court of justice, the delivery has been secret, and a greater or less space of time has elapsed since its occurrence. The infant is found dead. The proofs which we have now enumerated, are inapplicable or inconclusive, and a further investigation is required to ascertain the truth. We hence come to the examination of the question of INFANTICIDE.*

II. *Of the signs of the maturity or immaturity of the child.*

A knowledge of these is no less necessary, than of those noticed in the preceding section. The medical examiner, in all cases, should be well acquainted with the indications that mark the various epochs of fœtal life, as well as those which prove its arrival at maturity. A sketch, therefore, of the gradual developement of the fœtus, from the æra of its first formation, will be proper in this place. And I will premise, that the following summary is drawn from the observations of Aristotle, Hippocrates, Riolan, Haller, Roederer, Meckel, Burton, Baudelocque, William Hunter, Burns, Chaussier, Beclard, Capuron, Clarke, Merriman, Sömmering, Tiedemann and Devergie. There are some recent authorities, which I regret that I have not been able to examine; and I would also remark, that in many cases, the observations are to be taken as means deduced from extremes, and they are, therefore, liable to some variation.†

From the time of the first evidence of impregnation to the fifteenth day, the product of conception appears only as a gela-

* The authorities on this section, which deserve attention, are, Denman, p. 391 to 399; Capuron, p. 234, &c.; Hutchinson, p. 17; Fodere, vol. 2, p. 81; Smith, p. 315; Belloc, p. 91. Dr. Jaeger's dissertation on this subject, (in Schlegel, vol. 5, p. 23,) may be consulted with great advantage. Several cases are related by the author, where he examined infants dead before birth, with a direct view to the question now noticed.

† Dr. Pockels, of Brunswick, has given "a contribution to the history of the developement of the human embryo, in the first three weeks after conception." (See *Medico-Chir. Review*, vol. 8, p. 575.)

tinous, semi-transparent, flocculent mass, of a grayish colour, liquefying promptly, and presenting no distinct formation, even by the aid of the microscope.* It measures, at fourteen days, one-twelfth of an inch in length (Pockels); and at three weeks, one-tenth of an inch: At thirty days, it has the size of a large ant, according to Aristotle; of a barley-corn, according to Burton; and of a house-fly, according to Granville. Baudelocque, however, observes that it is not larger than the malleus of the tympanum. Its length varies from three to five lines. At six or seven weeks, its length is almost ten lines. The form and lineaments of the principal organs, and the place from which the members are to arise, can now be observed, and it is equal in size to a small bee. At this time also, the fluid contained in the membranes is much heavier than the embryo. At two months, the length is about two inches, and its weight, nearly two ounces.† This is the usual statement. Maygrier, however, puts the length at four inches, and Devergie, at from sixteen to eighteen lines, while the former states the weight at five drachms, and the latter at from two to four. All parts are perfectly distinct, and many

* The general statement is, "that the ovum cannot be discovered with the naked eye, or by the microscope, in less than twenty-one days after conception. On the other hand, Sir E. Home has very lately examined the uterus of a female who had been impregnated only eight days previous, and in which he found an ovum of a very minute size." (Gooch's Midwifery, p. 88.) "The embryo may be perceived with the naked eye, at the fourteenth day after conception." (Granville on Abortion, p. 10.)

Velpeau, (*Embryologie*, p. 50,) and I believe, some other authors, doubt the possibility of the first of these statements, and question whether it was actually an ovum that was seen by Sir E. Home. The best opinion, however, would seem to be in its favour. See *Edinburgh Medical and Surgical Journal*, vol. 41, p. 407, and Ryan's *Midwifery*, p. 67, who quotes Meckel's assertion, that the embryo can be observed on the fifth day after conception. Velpeau (*Embryologie*, p. 51,) says, that he has seen three ova, which did not exceed twelve days. They were all of the same form, and of the size of a large pea—and this is the earliest period, so far as his experience goes, at which the ovum can be discerned.

I cannot omit in this place referring to a very curious case, in which the appearances of an apparently impregnated uterus, with its appendages, were examined immediately after the first coition. The female poisoned herself the next morning. The dissection is given by Dr. Bond of Philadelphia. (*American Jour. Med. Sciences*, vol. 13, p. 403.)

† As an illustration of the diversity to which I have referred, I quote the following from Dr. Granville's recent work on Abortion, (p. 11.) "At two weeks, it weighs twenty grains, and is one inch long. It weighs an ounce and a half at three weeks, and measures three inches; between which and the sixth month, it increases in dimensions from three to six or nine inches, and in weight, from one ounce and a half to one pound." Dr. G. states these to be averages of minute and accurate observations made by Autenrieth, Sommering, Bichat, Pockels, and Carus, and confirmed by his own observations.

points of ossification are observed in the head, trunk and members. Sometimes the male sex may be distinguished. At the third month, it is said to average three ounces in weight. The following however, is given by late examiners,

		<i>Weight.</i>		<i>Length.</i>
Hamilton,	-	-	-	3 inches.
Maygrier,	-	2½ ounces,	-	6 inches.
Devergie,	-	1 to 1½ ounces,	-	2 to 2½ inches.
Burns,	-	2 ounces,	-	3 inches.

The nose and mouth are formed, and the features of the face become more distinct. The eyes are shut, and the eyelids adhere together—the head is longer and heavier than the rest of the body—the umbilical cord is formed—the genitals are distinct—the penis and clitoris are relatively very large—the nymphae are projecting, and the labia very thick.* At the fourth month, the fœtus is from five to six inches long, and weighs from four to five ounces. The external parts all develop themselves, with the exception of the hair and nails. The great relative proportion of the fluid of the membranes disappears, and the fœtus nearly fills the cavity of the uterus.† During the fifth month, the

* Velpeau asserts, that the umbilical cord begins to be formed during the first month of gestation. (American Journal of Medical Sciences, vol. 14, p. 402.)

† This is the period which demanded investigation in the recent trial for the murder of Sarah M. Cornell. "The alleged date of the conception was the 30th of August; the last appearance of the menses on the 21st of August, and death took place on the 20th of December. The fœtus weighed five ounces, and measured eight inches in length. The question arising upon these facts was, whether it was most probable that a fœtus of three months and twenty days should have attained the above size and weight, or that menstruation could continue after conception had taken place." (Boston Medical and Surgical Journal, vol. 8, p. 340.)

I have already noticed the latter in its bearing on this subject, and need only add, that if it be deemed most probable, it would go to prove that the conception did not take place at the time alleged, and thus tend to relieve the prisoner from the imputation of paternity. In addition to the circumstances mentioned, it must be added, that neither nails nor hair were found on the fœtus.

On the trial, Dr. Parsons stated, that he had examined twelve authors on this subject, and that the average deduced from them was, that at three months, the length of the fœtus was between three to four inches, at four months five inches, and at five months eight inches. Beclard was the only one who gives eight inches at four months.

As this subject has thus become peculiarly interesting, I will quote from individual authors:

		<i>Weight.</i>		<i>Length.</i>
Capuron,	-	4 to 6 oz.	-	5 to 6 in.
Orfila,	-	5 to 7 "	-	6 to 7 "
Ramsbotham,	-	-	end of 4th month,	5 "

motions of the fœtus are felt by the mother. The length is from seven to nine inches, and the weight, nine or ten ounces. The brain is pulpy, and is *destitute of circumvolutions or furrows*. The external ear is completed about this time, although its shape, which is like that of a gently depressed circle, differs from the ear after birth. The nails are distinct.* The hair begins to appear.

In the sixth month, we begin to find some traces of fat under the integuments, where previously nothing but a mass of gelatine had been observed. The head also, which before had been proportionably large, becomes smaller in comparison with the body. It is now, however, large and soft, and the fontanelles are much expanded. The brain acquires rather more consistence, but is still easily dissolved; and the pia mater seems only to lie over its surface, being separated with great facility. The skin is very fine, pliant, thin, and of a purple colour, especially in the palms of the hands, the soles of the feet, the face, lips, ears, and breasts.

	Weight.	Length.
Maygrier, - - -	7 to 8 oz.	8 in.
Hamilton, - - -	_____	above 5 "
Velpéau, - - -	_____	5 to 6 "
Gardien, - - -	_____	4 "
Burns, - - -	_____	5 "
Devergie, - - -	2½ to 3 "	5 to 6 "

Briand (2d edition, p. 128,) says, that at four and a half months, it is six or seven inches long, and weighs from five to seven ounces.

See also Dunglison's Physiology, vol. 1, p. 356.

* The length of an embryo at the end of the fifth month, is, according to Sommering, ten inches; while Dr. Burns and Dr. Hamilton do not allow that it is more than six or seven. (Supplement to Encyclopedia Britannica, vol. 1, p. 256, Art. *Anatomy*, by Dr. Gordon. Craigie's Anatomy, p. 76.) Dr. Dewees agrees with Burns as to the length, and also observes, that the above weight is too great. (Midwifery, 3d edition, p. 93.) Lecieux, however, whose opportunities for examination have been very extensive, says, (p. 12,) "D'Après un grand nombre de recherches, d'observations recueillies à l'Hospice de la Maternité, et comparées à celles que l'on trouve dans plusieurs écrivains, on peut regarder les résultats suivans comme le terme moyen et le plus ordinaire de la grandeur des fœtus depuis la fin du cinquième mois jusqu'à la fin du neuvième :

	Longueur.
A 5 mois, - - -	255 millimetres, ou 9½ pouces.
6 " - - -	325 " " 12 "
7 " - - -	380 " " 14 "
8 " - - -	440 " " 16 "
9 " - - -	488 " " 18 "

Devergie and Maygrier give the following numbers :

	Weight.	Length.
Devergie, - - -	5 to 7 ounces,	6 to 7 inches.
Maygrier, - - -	1 pound,	10 inches.

In males, the scrotum is slightly developed, and of a bright red colour; and the testicles are still in the abdomen. In females, the vulva is projecting, and the labia separated by the protuberance of the clitoris. The hair on the head is very thinly dispersed, short, and of a white or silvery colour—the eyelids are closed; the hair on the eyebrows and eyelashes but thinly scattered, and the pupil is closed by a membrane. The lungs are very small, white, and compact. The heart is large, and the liver very large, and situated near the umbilicus—the gall bladder contains only a small quantity of a nearly colourless fluid; and the meconium is small in quantity, and is found only in a part of the large intestines. The bladder is hard and pyriform, and has a very small cavity. The ordinary weight of the fœtus at this time, is from one to two pounds; and its length from nine to twelve inches*—*the middle of which is at the abdominal extremity of the sternum.*†

At the seventh month, all the parts, both external and internal, are still more developed. The skin assumes a rosy hue, and becomes more dense; and it is covered with a sebaceous fluid, so as to form a whitish, unctuous covering. The eyelids are no longer united, and the membrana pupillaris separates, so as to form the pupil.‡ The cerebral pulp becomes more consistent,

* Eight or nine inches and about one pound. (Burns' Hamilton.) The various quotations from Dr. Hamilton are copied from Blundell's Midwifery.

		Weight.		Length.
Devergie,	- - -	1 pound,	- - -	9 to 10 inches.
Maygrier,	- - -	2 pounds,	- - -	12 inches.
Lecieux,	- - -	<hr/>	- - -	12 inches.

† In the Quarterly reports of the New-Town Dispensary, (Edinburgh,) there are two cases mentioned, which it will be proper to add in this place. A child, supposed to be advanced six and a half months, lived eleven days. On the fifth day after its birth, it weighed two pounds nine ounces and three quarters avoirdupois. Another, probably at the sixth month, lived fourteen hours—weighed two pounds four and a half ounces English, and measured thirteen and seven-eighths inches. (Edinburgh Medical and Surgical Journal, vol. 12, p. 249, 526.)

‡ There is considerable diversity of opinion concerning the constancy of this phenomenon. Cloquet says, that in the fœtus of the ninth month, the little arterial circle of the iris, which is formed after the rupture of the membrana pupillaris, and at the cost of its vessels, is seen placed on the very edge of the pupil; and often, even in the new-born child, some of its vessels still advance beyond the circumference of this opening. He has seen it ruptured even at the sixth month, and adds, that it is seldom found entire at the eighth. On only one occasion, did he discover it in a full grown fœtus, and then it was broken in the middle. (Quarterly Journal of Foreign Medicine and Surgery, vol. 1, p. 64; and Eclectic Repertory, vol. 9, p. 190.)

Dr. Jacob of Dublin, on the other hand, rejects the above opinion, as he has usually found it present in most new-born infants. He says the vessels are at first

and its surface is a little furrowed, and adheres somewhat to the meninges. The meconium increases in quantity—the hair on the head is longer and takes a deeper hue. The nails acquire more firmness. Weight from two to three pounds. Length from twelve to fourteen inches. (From two to four pounds, and twelve inches. *Granville*. Between eleven and twelve inches. *Hamilton*. Three to four pounds, and eleven to twelve inches. *Devergie*. Two to three pounds, and fourteen inches. *Maygrier*. Fourteen inches. *Lecieux*.) *The middle of the body is nearer to the sternum than to the navel.**

At the eighth month, the skin has acquired more density, and becomes whiter; it is covered with very fine and short hairs, and its sebaceous covering is more apparent. The nails are firmer; the hair of the head longer and more coloured. The breasts are often projecting, and a lactiform fluid may be pressed from them. The testicles in males are frequently engaged in the abdominal ring. In females, the vagina is covered with a transparent mucus. The groove in the cerebral substances gradually become more marked; and the spinal marrow, pons varolii, and medulla oblongata, acquire a remarkable consistence and even firmness. The lungs are of a reddish colour—the liver preserves nearly its former relative size, but it is more remote from the navel—the fluid in the gall-bladder is of a yellowish colour, and has a bitter taste. The weight at this time is from three to four, and sometimes even five pounds. Length, sixteen inches or more. (From four to five pounds and seventeen inches. *Granville*. From fourteen to fifteen inches. *Hamilton*. Four to five pounds and thirteen to fifteen inches. *Devergie*. Four pounds and sixteen inches. *Maygrier*. Sixteen inches. *Lecieux*.)

obliterated, and then the membrane is absorbed. Professor Tiedemann is said to have repeated the experiments of Dr. Jacob, (injecting the membrana pupillaris at the full time,) and confirmed their accuracy. (Anderson's Journal, vol. 1, p. 110. American Journal of Medical Sciences, vol. 1, p. 192.)

* We owe our knowledge of this test of ascertaining the age of the fœtus by taking its length, to Chaussier; and much reliance has been placed on it. I find, however, that its accuracy is questioned by Mende, who observes as follows: "The middle point by no means corresponds to the same part of the body in fœtuses of the same age, a fact for which we might be prepared by considering that the several sizes of the fœtus depend, now on its large head and neck, now on the trunk, and again on the magnitude of the limbs. This I have verified by numerous measurements, taken with great care and pains, and the conclusion I have arrived at is, that the directions laid down by Chaussier are uncertain for practical purposes; and more particularly, for those of the medical jurist." Cummin's Lectures in London Med. Gazette, vol. 19, p. 68.

The middle of the length is nearer to the navel than to the sternum.

At the ninth month, ossification is more complete—the head is large, but it has a considerable degree of firmness. The bones of the cranium, although movable, touch each other with their membranous margins—the fontanelles are smaller; the hair is longer, thicker, and of a deeper colour; and the nails become more solid, and prolonged to the extremity of the fingers. The circumvolutions on the surface of the brain are more numerous—the cineritious portions begin to be distinguished by their colour; and although the lobes which compose the cerebrum, retain their former softness, yet the cerebellum and the basis of the cerebrum, have acquired a remarkable consistence. The head measures longitudinally, from the forehead to the occiput, four inches to four inches and a quarter, and between the parietal protuberances, from three and a half to four inches. Of 60 male and 60 female infants, born at the full time, whose heads were measured by Dr. Clarke, the circumference passing through the occipital process and the middle of the brow, was on an average, 13.8 inches, while the arch from ear to ear, over the crown, was 7.32 inches.* The abdomen is large and round. The lungs are redder and more voluminous. The canalis arteriosus is large, and its coats are thicker and denser than formerly. The meconium fills nearly the whole of the intestines, and the bladder contains urine. In fact, the digestive apparatus, the heart and the lungs, are in a state fit to commence extra-uterine life. The length varies from nineteen to twenty inches or more—the *middle of which is at the navel, or a very little below*.†

The recent observations made by Tiedemann, Serres, and the Wenzels, on the brain of the fœtus, may most conveniently be arranged together in this place. At the fourth week, the mass which corresponds to the head in the embryo, is quite transparent, and contains a limpid fluid. At the seventh and eighth weeks, the form and disposition of the brain and spinal cord can be distinguished; and the dura mater is also observed, adher-

* Craigie's Anatomy, p. 76. One measured 15 inches in circumference, and one, eight and a half inches from ear to ear; but none were under twelve inches in the one direction, or six and a quarter inches in the other.

† Hutchison, p. 6 to 14. Capuron, p. 165 to 173. Foderé, vol. 2, p. 149. Burns, p. 114 to 118. Devergie puts the length at from sixteen to eighteen inches, and the mean weight at six and a quarter pounds. Lecieux, the length at eighteen inches.

ing to the inner surface of the skull. During the third month, the tubercula quadrigemina, the optic thalami and corpora striata are developed; and in the eleventh week, the cerebellum and the hemispheres were recognized. At the fourth month, the tuber annulare and the pituitary gland were observed. The corpus callosum, in the sixth month, is only half as long as the hemispheres of the brain. The choroid plexus is formed in the seventh month, and the corpora olivaria do not protrude till between the sixth and seventh, but the corpora pyramidalia are fully formed a month sooner; and in both, the protrusion is, owing to the developement of cineritious matter. It is not till near the termination of pregnancy, that the cineritious substance is formed in the spine, or even very manifestly in the convolutions of the brain.*

The Wenzels found the following proportionate increase of the brain in their investigations: In an embryo of five months, they found the brain to weigh 720 grains, of which the cerebrum weighed 683 grains, and the cerebellum 37; being in the proportion of $18\frac{1}{3}$ to 1. At eight months, the respective numbers were, 4960, 4610, 350, or as $13\frac{2}{3}$ to 1. At the full time, 6150, 5700, 450, or as $12\frac{2}{3}$ to 1.†

The observations of M. Béclard on the skeleton, may also be stated; as its increase is more regular than that of the softer parts, and its appearance may afford important evidence in cases which vary from the ordinary state.

“After two months have elapsed from the period of conception, the skeleton is about four inches and three lines in length, that of the spine being two inches: at three months, the former is six inches, and the proportion of the spine as two and two-thirds to six: at four months and a half, it is nine inches, and the spine four: at six months, twelve inches, and the spine five: at seven and a half months, fifteen inches, the spine six and one-third: at nine months, or the period of birth, it is ordinarily from sixteen to twenty inches in length, or at a medium of eighteen inches; and the spine is in the proportion of seven and three-fourths to eighteen, to the whole length of the body.

* Edinburgh Medical and Surgical Journal, vol. 19, p. 456; vol. 23, p. 81, &c.

† Lawrence's Lectures on Physiology, p. 170. See also Dr. Copeland's Notes to Richerand's Physiology, Appendix, p. 56, “On the formation of the spinal marrow and brain.”

These calculations were made from observations on about fifty fœtuses, at each of the periods above indicated.

“Each vertebra, consisting originally of a section of a solid cylinder, and a ring furnished with several apophyses, is, in general, formed by three primitive points of ossification; the one anterior, which by its developement, forms the body or solid part of the bone; and two lateral ones, which constitute the apophysarial masses, and which, uniting together with the former, constitute the annular structure. Besides these, each vertebra is completed by several secondary points of osseous developement.

“At about the sixth month of intra-uterine life, two points of ossification are found in the second cervical vertebra, one situated above the other. Towards the seventh month, the superior point, which answers to the odontoid process, is larger than the inferior, which relates to the body of the bone. At about the eighth month, the transverse processes have begun to ossify in the first of the lumbar vertebræ. At the time of birth, ossification has commenced in the body of the first cervical vertebra, and also in the first bone of the coccyx. At this age the body of the fourth lumbar vertebra, which is the most voluminous, is three lines in depth and six in breadth. At the same period, the lateral portions of the six superior dorsal vertebræ begin to unite together, so as to form a ring posteriorly to the bodies of these bones. The lateral arch of the second, which is the largest, forms a chord of seven or eight lines.”*

The weight of the fœtus at the full term of uterogestation, has been the subject of numerous observations, and as a preliminary remark, it must be noticed, that this differs according to the conformation and habits of the parent and sex of the child. Healthy females residing in the country, or engaged in active occupations, have generally the largest children. Male children also, generally weigh more than female ones. The diversity extends also, as we shall see, to various countries.

In Germany, Roederer found the weight in one hundred and thirteen cases, to vary from seven to eight pounds, and he lays it down as a rule, drawn from his observations, that it is rarely

* Hutchinson on Infanticide, pages 12, 13, 14.

less than six pounds.* Dr. Hunter states that Dr. Macauley examined the bodies of several thousand new born and perfect children at the British Lying-in Hospital, and found that the weight of the smallest was about four pounds and the largest eleven pounds, but by far the greater proportion was from five to eight pounds.† Dr. Joseph Clarke's inquiries furnished similar results. The greatest proportion of both sexes according to him, weighed seven pounds, yet there were more males than females found above, and more females than males below that standard. Thus out of sixty males and sixty females, thirty-two of the former and twenty-five of the latter, weighed seven pounds, and there were fourteen females, but only six males who weighed six pounds. On the other hand there were sixteen males, but only eight females who weighed eight pounds. Taking then the average weight of both sexes, it will be found that twelve males are as heavy as thirteen females. The exact average weight of male children, according to Dr. Clarke, was seven pounds five ounces and seven drachms, and that of female, six pounds eleven ounces and six drachms.‡

Dr. Clark of Dublin, found the weight to vary from four to eleven pounds. Dr. Merriman states in his lectures, that he delivered one which weighed fourteen pounds (it was born dead;) and Dr. Croft delivered one alive, weighing fifteen pounds.§

In France the weight seems to be less than in England. Of 1541 examined by Camus, the greatest weight was nine pounds; and of this there were sixteen instances—the ordinary, from five to seven, and the average, six pounds and about a quarter: there were thirty-one instances in which it was as low as three pounds. Baudelocque, however, states that he has seen two of nine pounds

* *Bosc de Diagnosi vitæ fœtus et neogeniti*, in Schlegel, vol. 3, p. 23. I have selected this as the most accurate account of Roederer's observations, as there is a discrepancy among the writers that notice him. Foderé (vol. 2, p. 153) says the weight, according to his table, is from six to seven and a half pounds, and Hutchinson (p. 15) from five to six and a half.

† Hunter's *Anatomy of the Human Gravid Uterus*, p. 68.

‡ Phil. Transactions, vol. 76, p. 349. Dr. Clarke also mentions the following observations as made by Roederer. The placenta of a male was found to weigh, on an average, one pound two ounces and a half, whilst that of a female weighs half an ounce less. Female children, who at the full time weigh under five pounds, rarely live; and few males, who even weigh five pounds thrive. They are generally feeble in their actions, and die in a short time.

§ Hutchinson, p. 15. At a meeting of the Westminster Medical Society in London, held Dec. 1830, Mr. Jewell related a case in which the weight of the child was twenty pounds. He stated it on the "authority of an extremely intelligent midwife, of whose veracity no doubt could be entertained." (Lancet N. S. vol. 7, p. 410.) Dr. Ramsbotham (the father) delivered a child weighing 16½ lbs. avoirdupois. (London Med. Gazette, vol. 13, p. 551.)

and three quarters, one of twelve, and another of thirteen. The last, he adds, had several teeth well advanced and ready to cut. On the other hand, he had delivered some at the full time, who weighed but five and four and a half pounds, and several indeed only three pounds, and three quarters. These were more common than those of nine pounds, and grew to as great a size after birth.* Subsequent observations on twenty thousand children, at the Hospice de la Maternité at Paris, show that the average weight of the fœtus, at the full time, is there about six and one quarter pounds. The extremes varied from ten and a half pounds (which was the highest) to three pounds.† Capuron mentions that he has seen two instances where the children weighed twelve pounds.‡

At the Lying-in Hospital at Florence, of 506 children born in eight years, (from 1816 to 1824,) the heaviest weighed 16 pounds (the Tuscan weight of 12 ounces) and 4 ounces; the smallest born at the full period, weighed five pounds; the majority about ten pounds.§ In the Obstetrical Institution at Pavia, of 116 children born in two years, 14 pounds 6 ounces was the greatest weight, and 5 pounds the least.|| In the Royal Lying-in Institution at Dresden, Professor Carus reports 225 children, born

* Baudelocque's Midwifery, vol. 1, p. 256.

† Lecieux, *Considerations sur l'Infanticide*, p. 9, 12.

The following table, taken from Burns' Midwifery, edition of 1823, is somewhat different in its results from what is given in the text, and I do not know how to reconcile them, unless to suppose that they were taken at a later period. It purports to be the respective weights of 7.077 new-born children, accurately ascertained at the Hospice de la Maternité :

34 weighed from 1 to 1½ pounds.	
69	- - - - 2 to 2¾
164	- - - - 3 to 3¾
396	- - - - 4 to 4¾
1317	- - - - 5 to 5¾
2799	- - - - 6 to 6¾
1750	- - - - 7 to 7¾
463	- - - - 8 to 8¾
82	- - - - 9 to 9½
3	- - - - 10 —

7077

The following, from Dunglison's Physiology, vol. 1, p. 355, is important to be noticed in accurate investigations. "The Paris pound, *poids de marc* of 16 ounces, contained 9216 Paris grains, whilst the avoirdupois contain only 8532.5 Paris grains. The English inch is 1.065977 Paris inch."

‡ Capuron, p. 172. Cranzius says he had seen one fœtus weighing twenty-three, and another twenty-seven pounds !!

§ Anderson's Quarterly Journal of Medical Sciences, vol. 2, p. 101.

|| Ibid, vol. 2, p. 100; and Quarterly Journal Foreign Medicine, vol. 5, p. 330.

during 1827. The weight varied from $4\frac{1}{2}$ pounds to $10\frac{1}{4}$ pounds.* In the same institution during 1833, 314 children were born, the heaviest was 10 pounds, and the lightest $2\frac{1}{2}$. In 1834, of 242 children born, the heaviest was 9 pounds, the lightest 2 pounds.† In the Midwifery Institution at Stuttgart, from 1828 to 1833, there were 572 births; 281 boys and 291 girls. The mean weight was 6 pounds $13\frac{1}{2}$ ounces.‡ At the Lying-in Hospital at Moscow, in 44 cases of both sexes, Richter found the mean weight to be $9\frac{1}{5}$ pounds: minimum 5 pounds, and maximum 11 pounds. At the Lying-in Hospital of St. Peter, in *Brussels*, (I presume,) Quetelet found the mean weight of 63 males born at the full time, to be $6\frac{1}{2}$ pounds, (3–20 killog.) and of 56 females, to be $5\frac{1}{6}$ pounds: mean, $6\frac{3}{8}$ pounds. The maximum in the male, was $9\frac{3}{8}$ pounds; in the female, $8\frac{1}{6}$ pounds: the minimum in the male, $4\frac{1}{6}$ pounds; in the female, $2\frac{4}{8}$ pounds.§

In the first edition of this work, I stated the opinion of my colleague, Professor Willoughby, that the average weight in this country exceeds seven pounds. Professor Dewees decidedly agrees to this, as the result of his experience. He has met with two ascertained cases of fifteen pounds, and several which he believes to be of equal weight.|| Dr. William Moore, of New York, had several cases, where the weight was twelve pounds each; and an instance occurred in that city, in 1821, where the fœtus (born dead) weighed sixteen pounds and a half.¶

The most correct deduction probably from these observations, is to allow the average to vary from five to eight pounds.**

When there are two children in utero, the weight of each individual is generally less than that of a single fœtus, but their united weight is greater. The average weight of twelve twins, examined by Dr. Clarke, was eleven pounds the pair, or five and a half each. Duges, from a review of the Registers at Paris, found that, out of 37,141 *accouchemens*, there had been 36,692 single births, 444 twins, and 5 triplets. The twins averaged four

* *Lancet*, N. S., vol. 3, p. 648.

† *British and Foreign Med. Review*, vol. 2, p. 274.

‡ *Lancet*, N. S., vol. 18, p. 344. Report by Dr. Elsaesser.

§ *Annales D'Hygiène*, vol. 10, p. 12–13.

|| Dewees's *Midwifery*, 3d edition, p. 89.

¶ *New York Medical and Physical Journal*, vol. 2, p. 20.

** "There is a good deal of difference in the weight of the fœtus, being, I believe, about seven pounds—some, especially if born prematurely, weigh much less, some much more." (*Blundell's Lectures*, in *Lancet*, N. S., vol. 3, p. 133.)

pounds each in weight, and the extremes are three and eight pounds.* Respecting triplets, we have not sufficient data, to form a general rule. Duges thinks that they have rarely less weight than twins. In a case that occurred to Dr. West, at Tiverton, Rhode Island, the respective developements were as follows:

<i>Length.</i>	<i>Weight.</i>	
15 $\frac{3}{4}$ in.	4 lb. 3 oz.	Navel in the centre.
15 $\frac{3}{8}$	3 8	Navel half an inch below centre.
17 $\frac{3}{4}$	4 9	Navel half an inch below centre.

They were all females.†

Dr. Hull, of Manchester, met with a delivery of five children, who did not weigh five pounds and a quarter. They measured from eight to nine inches in length, and two of them were born alive.‡ Dr. Bryan, of Fairfield, in this state, had, however, a case of four children, which all lived a day; and their aggregate weight was eleven pounds, fourteen ounces. Their length varied from 14 $\frac{3}{4}$ inches to 17 $\frac{1}{2}$ inches.§ Dr. Hubbard, of Glastonbury, in Connecticut, recently met with a case of triplets, in which the united weigh was 18 pounds. Two were born alive, and remained so at the end of nine months—the third was still-born.|| In the *Western Medical Gazette*, (No. 16, August 1, 1833,) a practitioner gives an account of triplets born alive, and all surviving until the sixth day, when one died. On the eighth day, another died; but the third did well. Their united weight, exclusive of the placentas, was twenty-two and a fourth pounds—a boy of nine pounds, a boy of seven and a half, and a girl five and three-fourths pounds. Lastly, I will mention a recent case at Boston, by Dr. Palmer—one child (a boy) weighed seven pounds, another (a girl) six pounds, a third (a *lusus naturæ*) five pounds, the placenta two pounds; total twenty pounds.¶

The length of the *fœtus* at the full time, varies much less than its weight. Roederer concludes from his examinations, that the

* London Medical Repository, vol. 25, p. 555, from *Revue Medical*, March, 1826. "Dr. Clarke had seen no case of twins weigh more than twelve pounds: now every year I see twins weigh fourteen pounds." Notes of Prof. Hamilton's (of Edinburgh.) Lectures, in *Lyall's Gardner* peerage case. Introduction, p. 28.

† Boston Medical Magazine, vol. 2, p. 393.

‡ Philosophical Transactions, vol. 77, p. 344.

§ New York Medical and Physical Journal, vol. 1, p. 417.

|| Boston Medical and Surgical Journal, vol. 5, p. 414.

¶ Boston Medical Magazine, vol. 2, p. 328.

average length of a male is twenty inches and a third, while that of a female is nineteen inches and seventeen-eightieths.* Petit assigns twenty-one inches as the usual length. Hutchinson says, it is ordinarily from nineteen to twenty-two inches, and seventeen and twenty-six inches will include the two extremes, excepting some very rare cases; while Foderé and Capuron place the extremes from sixteen to twenty-three.† This last author attaches great importance to the difference in the proportion between the length of the superior and inferior parts of the body, and he conceives that attention to this, is one of the best modes of verifying the age of the fœtus. As a general rule, there will be an equilibrium between the upper and lower parts of the body, at the ordinary term of gestation, and the navel will be at the middle of the body, or nearly so. Before that time, the middle will approach nearer to the head, in the manner that I have mentioned in the preceding pages.‡

In the institutions quoted above as to weight, the length was as follows: At Florence, the greatest length, 20 inches; the least, 15 inches—the common length, from 17 to 18. At Pavia, from 21 inches and 3 lines, to 15 inches and 9 lines. At Dresden, in 1827, from 20 to 16½ inches; 1833, greatest length 22.37 inches—least 14.91. In 1834, greatest 21.30—least 14.38. At Stuttgart, mean length 16.8 inches. At Moscow, the mean length, ascertained by Richter, was 18½ Paris inches; maximum 21, and minimum 15. At Brussels, the mean length of 65 males, was 18 inches and 3 lines; of 56 females, 17 inches and ten lines, (Que-telet.)

Dr. Dewees once delivered a child, that measured 27 inches.§

* There is some discrepancy in Roederer's results. Dr. Craigie says, that he found the mean length of 16 male children, born at the full time, to be twenty and ten-twelfths inches, and of 8 females, only twenty and four-twelfths. (*Anatomy*, p. 77.)

† Bose (in Schlegel, vol. 3, p. 25,) says he has met with two—"Viginti et quatuor pollices ulnæ Lipsicæ pene superasse, hos ultimos autem a rusticis matribus prognitos fuisse."

‡ Capuron, p. 173. Chaussier appears to have been the first that noticed these proportions, (see Ballard, p. 168;) although Capuron does not acknowledge the obligation.

§ The following curious case is taken from the *Edinburgh Medical and Surgical Journal*, vol. 4, p. 516. "The public newspapers recorded the following birth in the month of May, 1808. At the poor-house in Stoke-upon-Trent, (Staffordshire,) Hannah Bourne, a deformed dwarf, measuring only twenty-five inches in height, was, after a tedious and difficult labour, delivered of a female child of the ordinary size, measuring twenty-one and a half inches, being only three and a half less than the

A reviewer in the *Edinburgh Medical and Surgical Journal* states, that of sixty-four children of both sexes, measured by him in the country, (Scotland,) the average was between 19 and 20 inches. Chaussier makes it 18 French inches, and Billard, from the measurement of 54 infants, concludes, that from 16 to 17 French inches, is the standard length.*

It is evident that the signs drawn from the structure, weight, and dimensions of the fœtus, are liable to some variety; and this depends on various circumstances, such as the age and vigour of the mother, her mode of life, the diseases to which she may have been subject, and probably the climate in which she lives.

The characters which mark the maturity and perfection of the organs and functions of the child, are thus stated by Foderé and Capuron: The ability to cry as soon as it reaches the atmospheric air, or shortly thereafter, and also to move its limbs with facility, and more or less strength; the body being of a clear red colour;† the mouth, nostrils, eyelids and ears perfectly open; the bones of the cranium possessing some solidity, and the fontanelles not far apart; the hair, eyebrows and nails perfectly developed; the free discharge of the urine or meconium in a few hours after birth; and finally, the power of swallowing and digesting, indicated by its seizing the nipple, or a finger placed in its mouth.‡

The child, on the contrary is considered immature,§ when its length and volume are much less than that of an infant at the full time; when it does not move its members, and makes only feeble motions; when it seems unable to suck, and has to be fed artificially; when its skin is of an intense red colour, and tra-

mother. The child was, in every respect, perfect, but still-born. The mother is likely to do well."

* *Edinburgh Medical and Surgical Journal*, vol. 40, p. 192.

† This generally according to Billard, disappears from the fifth to the eighth day, and is succeeded by various shades before it becomes white. Desquamation of the cuticle, also, in powder or in scales generally occurs at twenty-four hours after birth, and continues to the third or fourth day. Cummin, *London Med. Gaz.* v. 19, p. 71.

‡ "In mature children, the scrotum is corrugated, not particularly red, and generally containing the testes; in female children the nymphæ are covered by the labia: whereas, as Professor Nagele observes, in premature children the testes are not always down, the labia are apart and the nymphæ protrude, and in both sexes, the generative organs are extremely red." *British and Foreign Medical Review*, vol. 1, p. 104.

§ By this term is understood, a birth before the full period of gestation. There is another division more generally adopted. A delivery before the seventh month, is called an *abortion*; and at any time between the seventh and ninth month, a *premature birth*.

versed by numerous bluish vessels; when the head is covered with a down, and the nails are not formed; when the bones of the head are soft, and the fontanelles widely separated; the eyelids, mouth and nostrils closed; when it sleeps continually, and an artificial heat is necessary to preserve it; and when it discharges its urine and the meconium imperfectly.*

Should the examiner be called on to decide this question after the death of the child, it will be his duty, after noticing such external circumstances as I have already indicated, to proceed to a dissection of the body. All those appearances which mark the presence of foetal life, and which are distinctly explained in anatomical and obstetrical works, should be carefully noticed.† The navel, liver, heart, and particularly the lungs, should be examined; and the inquiry must be, whether the changes necessary for independent life have taken place.‡

III. *The state necessary to enable the new-born infant to inherit.*

It frequently becomes a question of great importance in civil cases and particularly in those relating to the disposition of pro-

* I insert the following extract from an English newspaper, which I accidentally met with, because it favours us with some information from an eminently experienced accoucheur. "In the evidence on Bailey's divorce bill, in the House of Lords, March, 10, 1817, the point in dispute appeared to be, whether Mr. Bailey's child was full grown at its birth? The nurse swore that it cried with a strong voice, and was fed three times in the course of the day when it was born. Dr. Gardiner, the attending physician, corroborated the testimony of the nurse as to the full growth of the child. Dr. Merriman was then called in, and examined as to the consequences of a premature birth on the offspring. He said he had known a child born in six months and eighteen days, live to grow up, but never to become stout. A child born under such circumstances, would be smaller than usual; the skin would be redder, and the face not so completely formed. As far as his experience went, he should conclude that it could not cry strongly, and would be oppressed by difficult respiration. The perfect conformation of the nails, strong voice, and usual size, were proofs of a full-grown child." (Globe newspaper, March 11, 1817.)

† Burns' Midwifery, p. 118 to 122.

‡ Chaussier, according to Quetelet, has remarked that the infant diminishes a little in weight immediately after birth. The latter made several observations, (seven,) in order to ascertain whether this does occur, and found it even so. He gives the mean deduced from these seven cases, as follows:

	Weight.
Immediately after birth, - - -	3.126 kilogrammes.
On the 2d day, - - -	3.057
3d " - - -	3.017
4th " - - -	3.035
5th " - - -	3.039
6th " - - -	3.035
7th " - - -	3.060

3.059 kilogrammes is equal (according to our author) to 6½ pounds. (Annales d'Hygiène, vol. 10, p. 15.)

perty, to ascertain whether the infant is born alive. In this country the subject becomes very interesting, since our law is borrowed from that of England, which is peculiar in some of its provisions, and enables property to be held by a certain class of persons on the establishment of the above fact. For the sake of order, I shall, in the first place, briefly notice the period of gestation after which children are considered capable of living; secondly, mention the laws, of various countries, and the decisions under them, as to what constitutes the life necessary for inheritance in the infant; and shall then conclude with some observations on the question how far deformity incapacitates from inheriting.

1. The French employ a very useful word in noticing this subject—the *viability* of the infant; and I shall take the liberty of using it, although aware that great caution is necessary in the introduction of foreign terms. As a general rule, it seems now to be generally conceded, that no infant can be born *viable*, or capable of living, until one hundred and fifty days or five months after conception.* There are, however, cases mentioned to the contrary. A person named Fortunio Liceti, is said to have been born after a gestation of four months and a half, and to have lived to the age of eighty.† Dr. Rodman, of Paisley, relates the case of an infant surviving, where the mother was confident that the period of her gestation was less than nineteen weeks. She had previously been the mother of five children. In such cases, however, we should recollect that females are lia-

* Dr. William Hunter, however, when asked what is the earliest time for a child's being born alive, answered, "A child may be born alive at three months; but we see none born with powers of coming to manhood, or of being reared, before seven calendar months, or near that time. At six months it cannot be." (Hargrave's Note 190* on Section 188 of Coke upon Littleton.)

The Roman law by one of its provisions *de suis et legitimis hæredibus*, decided that a child might be born alive six months and two days after conception; and by another, *de statu hominum*, required seven months. (Foderé, vol. 2, p. 110.)

At the Imperial Josephine Academy in Vienna, a six months' child of two pounds weight and twelve inches long, lived nearly three days. (Quarterly Journal of Foreign Medicine and Surgery, vol. 2, p. 100.)

† Capuron, p. 157. I find the following French law case in Denizart's Collections, Art. *Grossesse*, vol. 9, p. 522: A merchant arrived from St. Domingo at Bordeaux, June 5, and married the next day. His wife had an abortion on the first of October. He pretended that the child had lived; and, in consequence, demanded a revocation of a donation, *entre vifs*, which he had made to his nephew before marriage. It was opposed, on the ground that the delivery took place on the 118th day, and that it was impossible that the infant could have lived. It was contrary to reason, it was added, to allow him to prove a fact which we know to be physically impossible. The decision was in favour of the nephew.

ble to mistakes in their calculations; and that conception may take place at various times during the menstrual intervals, and thus vary the length of the gestation. Such early living births are, at the present day, very generally and very properly doubted.*

The following are said to be extracts from the lectures of the eminent Professor Hamilton of Edinburgh: "All accounts of children living to maturity, who were brought forth at the fifth or sixth month, are fabulous, at least, I consider them so. I lately brought a child into the world a few days after the completion of the sixth month, which to my surprise was alive, and which lived nearly three days; and this is the longest period that ever I knew so early a fœtus live. At the completion of, or a few days after the seventh month, a child may and certainly often does, live to maturity. When I first began practice, I supposed that no child could live to maturity, which weighed less than five pounds avoirdupois, but experience has convinced me to the contrary; and now I am confident that a child of four and a quarter pounds weight, may live to maturity. No child at the full period of pregnancy weighs less than five pounds avoirdupois, and the common weight of children at the full period is seven pounds."†

In a late case in Scotland, Dr. Hamilton continued to maintain the above opinion. The Rev. Mr. Jardine of Kinghorn, was married on the 3d of March, and on the 24th of August, Mrs. J. was delivered of a very weak child, not three pounds in weight, but which with great care, had hitherto been kept alive. Mr. Jardine solemnly declared himself innocent, and threw himself upon the Presbytery. Dr. Hamilton was requested by that reverend body to come on and investigate the case. He could not, but wrote two letters, stating his own experience to be against

* In the case by Dr. Rodman, the child was alive and healthy nine months after birth. At three weeks, he measured thirteen inches in length, and weighed one pound thirteen ounces. He was so destitute of vital energy, that life was for some time preserved by keeping him constantly in bed with the mother, or other females. The length and weight just mentioned, are those according to the statement made in former pages, of an infant *advanced between the sixth and seventh month*; and although Dr. Rodman seems to question the accuracy of authors on this subject, yet the observations have been made in too many cases to be affected by this solitary exception. His object in publishing this case, is certainly highly laudable; and no physician, however premature the birth may appear to him, should neglect doing every thing to support and invigorate the appearances of life that are present. (Edinburgh Medical and Surgical Journal, vol. 11, p. 455; vol. 12, p. 126, 251.)

† Lyall's Gardner Peerage Case. Introduction, p. 28.

the probability of a child born in the sixth month surviving; referring, however, to two instances where children under similar circumstances had lived. One occurred in 1710, when the wife of a clergyman in the Presbytery of Wigton, was delivered of a living child within five lunar months after marriage, and Dr. Pitcairn, with other physicians gave it as their opinion, that the child had been procreated after marriage. The other was in Paisley in 1815, when a married woman, who had previously had children, gave birth to a child nineteen weeks after conception, and it lived a year and a half.

Dr. Thatcher was then written to. He came to Kinghorn, and the result was a certificate in favour of Mr. Jardine. He believed it possible. It appeared satisfactorily that the marriage, after being a matter of notoriety, was contracted at the appointed time. And when the child was born, there was no preparation for it—no clothing had been made—all were taken by surprise. The Presbytery acquitted Mr. Jardine of all criminality.*

We may from these observations conclude that between five and seven months, there have been instances of infants living, though most rare; and even at seven, the chance of surviving six hours after birth, is much against the child.†

* London Med. Gazette, vol. 17, p. 92. (From the Fife Herald, Oct. 1, 1835.) The individual, who communicates this case, says that he has recently seen a child prematurely born, (certainly before seven months,) which at birth weighed only $2\frac{1}{2}$ lbs. "It was alive when I saw it, and lived twelve days."

† Belloc and Capuron, among modern authors, mention instances of children surviving at six and six and a half months. They were very feeble and small—the head covered only with a light down, and the nails scarcely formed. There are some recent cases related in the journals, which may here be mentioned, but with the same caution as already offered. A supposed six and a half months' child, born near Calcutta, of European parents: at the time of the description, it was a month and twenty days old—weighed one pound and thirteen ounces—was fourteen inches in length, and was then suckling well. Case by Mr. Baker in Transactions of Medical and Physical Society of Calcutta, vol. 1, p. 364.

A case by Mr. Cribb, where the mother menstruated last on the 15th of April, and was taken in labour on the 2d of November, 1827. The child was very diminutive, but at ten months it weighed twelve pounds. (London Medical and Surgical Journal, for Nov. 1828.)

A case by Mr. Greening of Worcester, in Midland Medical and Surgical Reporter, vol. 2, p. 362.

Sundry cases, quoted from Meli, an Italian writer on viability, in Annales d'Hygiène, vol. 8, p. 466. Some of these are of five months.

A case by Mr. Thomson, of Alva, Stirlingshire, of a child of five months and a few days, (as was supposed,) surviving three hours and a half. Its length was $12\frac{1}{2}$ inches, and its weight 1 lb. 8 $\frac{1}{4}$ oz. The eyes were unopened and the nails not apparent. London Med. Gazette, vol. 19, p. 866.

Dr. Montgomery (Signs of Pregnancy, p. 262,) has seen one instance of a fœtus, which at the utmost could only have completed the fifth month, and which lived a few minutes, and another of five months and a half, which lived for four hours, "but

An opinion, which appears to be as old as the days of Hippocrates, has occupied the attention of many writers, concerning the viability of eight months' children. It seems to have been the prevalent idea, that they are not so capable of living as those of seven months. Obstetrical writers of the present day, adduce in its favour, the argument of experience, and they also urge, that the uterus has a greater power and disposition to contract, at the earlier, than the later period, while the cervix will also yield more easily. The head of the child being consequently not so much compressed, it has a better chance of surviving. But, on the other hand, it is argued that the nearer the child approaches the natural term of gestation, the greater will be the probability of living. Dr. Samuel Merriman says that the observations made by Madame De La Marche, the celebrated midwife of the Hotel Dieu at Paris, convinced Mauriceau, that *more than one half of those, who are born at eight months will live, while of those born at seven months, very few survive.* Dr. Merriman adds, from a list before him of premature births, in which the period of utero-gestation, was distinctly marked, that out of thirty-six cases of eight months' children, there died during the month of child-bed, only eight, while out of thirty-four cases of seven months' children, there died within the month twenty-one.*

2. If we proceed as far back as the Roman law, we shall find provisions on the subject before us. To enable the infant to succeed to property, it was necessary that *it should be perfectly alive, "si vivus perfectè natus est, etsi vocem non emisit;"*† and the decision of Zacchias is in accordance with it. *Non nasci, et natum mori, paria sunt.*

As to France, a capitulary of Dagobert ordained, that in order to succeed to property, the infant should live an hour, and be able to see the four walls and ceiling of the chamber. An ordi-

in both, the state was that of mere existence, without the presence of any condition that could lead to the most remote expectation of life being continued."

* Medico-Chirurgical Review, vol. 4, p. 739. Of this opinion are Capuron, p. 159; Fodéré, vol. 2, p. 168; Mahon, vol. 1, p. 157; Goelicke in Schlegel, vol. 5, p. 139; Orfila, vol. 1, p. 372; the Editor of the Annales D'Hygiène, vol. 8, p. 466. On the opposite side, see Dewees in Coxe's Medical Museum, vol. 2, p. 274; Barlow in Medico-Chirurgical Review, vol. 3, p. 320; New England Journal, vol. 12, p. 52.

† Chaussier, Viabilité, p. 3.

nance of Louis the IX. altered this law, and directed that it should cry, in order to enable it to succeed.*

The present French law is contained in the 725th and 906th articles of the civil code. *In order to succeed, the infant must be born viable; and in order to receive by testament, it is sufficient to have been conceived at the time of the death of the testator; but neither donation nor testament can have effect, unless the child be born viable.*† And the interpretation of the word *life*, or *being born alive*, is, according to the most distinguished lawyers and physicians of that nation, *complete and perfect respiration.*‡

The English law, so far as it has a bearing on the question before us, is contained in the provisions concerning a *tenant by the curtesy of England*, as it is called. By this is understood, “where a man marries a woman seised of an estate of inheritance, and has by her, issue born alive, which was capable of inheriting her estate. In this case, he shall, on the death of his wife, hold the lands for his life, as tenant by the curtesy of England.”§ The exposition of commentators is as follows:—“It must be born alive. Some have had a notion that it must be heard to cry, but that is a mistake. Crying indeed is the *strongest* evidence of its being born alive; but it is not the *only* evidence.”|| Coke says, “If it be born alive, it is sufficient, though it be not heard to cry, for peradventure it may be born dumb. It must be proved that the issue was alive; for *mortuus exitus, non est exitus*; so as the crying is but a proof that the child was born alive, and so is motion, stirring, and the like.”¶ The cases to which both these authors refer, certainly prove the doctrines stated by them to be the law of England; ** but it is to be feared, that the broad princi-

* Capuron, p. 198.

† Capuron, p. 9.

‡ “Enfin les jurisconsultes ont adopté l'opinion des médecins à cet égard, et ne font consister la vie ordinaire que dans la respiration complete. Le célèbre Merlin dit aussi très formellement qu'il n'y a que la respiration complete que constitue la vie.”—(Capuron, p. 199.)

Dr. Locock of London has lately put this case. A child's head is born, it cries, and of course breathes, and yet before the rest of the body is expelled, it dies. Can property be transmitted on such a life? I apprehend there can be no doubt of it, according to the English law. (See London Medical Gazette, vol. 12, p. 636, 677.)

§ An ancient provision in the laws of Æthelbert, reverses the law as now in force.

¶ “If a wife brought forth children alive, and survived her husband, *she was to have half his property.*”—Edinburgh Encyclopædia, vol. 2, p. 102, Art. Anglo-Saxon Laws.

|| Blackstone, vol. 2, p. 127.

¶ Coke Littleton, 30 a.

** Dyer's Reports, p. 25. “It was moved, that a man shall be tenant by the curtesy, although the issue be not heard to cry, so as it can be known that it hath life; for it may be, the issue is born dumb.” So was the opinion of Fitzherbert. This

ple thus laid down, may lead to practical injustice. I cannot better illustrate my ideas on this point, than by stating the following case, which lately occurred in England.

In 1806, a cause entitled *Fish or Fisher v. Palmer*, was tried before the court of exchequer at Westminster hall. It appears that an infant was born to Mr. Fish in 1796, which was supposed to be still-born; and on the death of his wife, he accordingly resigned her property to the legal heir. Some circumstances afterwards occurred, which induced him to bring the present action, and to attempt to prove that the child had not been born dead.

Dr. Lyon (deceased at the time of the trial) had declared, an hour before the birth that the child was alive; and having directed a warm bath to be prepared, gave the child, when born, to the nurse, to be immersed in the warm water. It did not cry, nor move, nor show any symptoms of life; but while in the water, (according to the testimony of two females, the nurse, and the cook,) there twice appeared a twitching and tremulous motion of the lips. Upon informing Dr. Lyon of this, he directed them to blow into its throat; but it never exhibited any other signs of life.

Several physicians were examined as to the deduction to be drawn from these symptoms. Drs. Babington and Haighton agreed that the muscular motion of the lips could not have happened, if the vital principle had been quite extinct; and that therefore the child was alive. Dr. Denman, on the contrary, gave it as his opinion, that the child was not alive. He considered that the motion of the lips did not prove the presence of the vital principle, and drew a distinction between uterine and extra-uterine life. The remains of the former, he thought, might have produced the twitching of the lips. The jury, however, found that the child was born alive; and the property which

was in the 28th of Henry VIII. The other case (Paine's in 8th Coke's Reports) is instructive, because it gives us the opinion of the old writers on this subject. Glanvill says that the husband inherits, "*ex uxore sua hæred' habuerit filiam clamantem et auditam infra quatuor parietes.*" And Bracton, "*Sive superst' fuerit liberi sive mortui, dum tamen semel aut vocem aut clamorem dismisserint, quod audiatur inter quatuor parietes, si hoc probet, et licet partus moriat' in ipso partu, vel vivus nascat, vel forte semi-mortuus, licet vocem non emisserit, solent obstetrices in fraud' veri hæred' protestari partum vivum nasci et legitim', et ideo necesse est vocem probare, et licet naturaliter mutus nascitur et surdus, tamen clamorem emittere debet.*" The court, however, (common pleas, 29th of Elizabeth,) decided according to the dictum of Littleton, as adopted by the commentators in the text, that "*the crying is but a proof of the life.* But in the case at bar, to remove all scruples, it was found that the issue was heard to cry."

he had surrendered ten years previous, returned again to Mr. Fish.*

It will readily be observed, that a very extensive latitude is given to juries by this decision; and that they may decide contrary to what is correct in physiology, on the opinions of men incompetent to guide on this subject. In the instance before us, indeed, they were justified in their verdict by the testimony of eminent physicians, but it must also be remarked, that the proofs of life relied on by them are equivocal. It has been suggested, and I think with truth, that these convulsive motions merely show that the muscular fibre has not yet lost its contractility. Still-born infants, or those who die instantly on being delivered, are not unfrequently observed to open their mouth, and extend their arms or legs. May not these be merely the relaxation of a contracted muscle, or the stimulus of the atmospheric air on a body unaccustomed to it?† Foderé remarks, that in his youth, he has frequently seen still-born children carried to a chapel of the Virgin, which was built on high ground. The cold air of the place produced such an excitement, that they appeared to raise their eyelids for an instant, and that instant was improved to administer the rite of baptism.‡ Chaussier also examined the body of several children, born at five, six, and even seven months, who were said to have lived one or two hours, and in whom a motion of the jaws and members had been observed, and indeed a slight respiration. He ascertained by dissection, that not one of them had lived after birth, and concluded, that the proofs observed, owed some of their strength to the wishes of friends, and were in fact nothing more than the feeble remains of fœtal life—resembling, in many respects, the appearances observed on the body of an animal recently decapitated.§

One of his latest productions (at the age of eighty-one) was an appeal to the Minister of Justice in France, relative to the looseness of the law on this subject. He notices the various signs,

* Foderé, vol. 2, p. 160; Smith p. 383.

† I am happy to add the opinion of so eminent a writer on Physiology as Professor Dunglison, in favour of the doctrine advocated above. "The irritability shown," says he, "must be regarded simply as an evidence, that the parts have previously and recently formed part of a living system." (*Human Physiology*, vol. 1, p. 317.)

‡ Foderé, vol. 2, p. 160. "Notwithstanding all this, I think that where there is a power of being affected by stimuli, (other than galvanic or electric) this, in common sense, must be held to constitute vitality; and no practical good can result from nice metaphysical distinctions between fœtal and extra-uterine life, when the child is fairly in the open air." DUNLOP.

§ Capuron, p. 198.

and shows their insufficiency. The pulsation at the umbilical cord, and the spouting of blood from it when cut, only prove that the blood has preserved its fluidity, and that there is some action left in the vessel. The evacuation of the meconium should not be deemed a sign of life, since it is sometimes discharged in the womb, and is often caused by a compression of the abdomen. Nor is the objection mentioned by Lord Coke, that the deaf and dumb cannot cry, and that therefore there might be injustice done in some cases, correct; since experience and observation show that they do cry when perfectly alive.* Chaussier insists that the proofs of life in these disputed cases, should be positive and manifest—such as the high red colour and warmth of the skin; a free and full respiration; sharp and continued crying, and motion of the heart and limbs, and these continuing for a longer time than a few minutes.†

The Scotch law seems to be more precise in its provisions. Individuals there, as in England, are allowed to hold property as tenants by the curtesy; but it can only take place where the issue has been heard to cry. “Lord Stair, in his *Institutes*, lays it down, that the children of the marriage must attain that maturity as to be heard to cry or weep; and adds, that the law hath well fixed the maturity of the children by their crying or weeping, and hath not left it to the conjecture of witnesses whether the child was ripe or not.” A case, in conformity to this doctrine, was decided in 1765, in the court of session, (*Dobie v. Richardson*.) “Dobie’s wife brought forth a child about nine months after marriage, which breathed, raised one eyelid, and expired in the usual convulsions about half an hour after its birth,

* “It need scarcely be said, that the deaf and dumb cry at the moment of birth, the same as other children. The natural cry is effected by them, as well as by the infant that possesses all its senses. It is the *acquired* voice alone, which they are incapable of attaining. (Dunglison’s *Physiology*, vol. 1, p. 317.)

† Chaussier, *Memoire medico-legale sur la viabilité de l’enfant naissant*, Paris, 1826. In 1828, Collard de Martigny, a French lawyer, also wrote on this subject, in consequence of the examination of a child, born alive at the full time, which breathed, cried and moved, but died at the end of ten minutes; and on dissection, such marks of disease were found as precluded the possibility of its surviving. Was this a case to which the law applied; or, in other words, was it *viable* civilly, although it evidently was not *naturally* so? Our author justly decides in the affirmative. It is manifest that any discussions beyond that of the proof of the existence of *perfect life*, (no matter how short that may be,) must lead to interminable disputes, and the benefit of a general rule will be lost in the consideration and adjustment of every individual case. This difficulty, however, can only occur in cases under the French law, and originates in the proper interpretation of the word *viable*. (*Questions de Jurisprudence, &c.*)

but was not heard to cry. The mother died in childbed; and the question was, whether the *jus mariti* was not lost by the death of the wife within the year, without a child of the marriage *who had been heard to cry?* After much argument on both sides, the decree was, that as the wife did not live a year and a day after her marriage, and *as it was not proved* that the child or fœtus of which she was delivered *was heard to cry*, the husband was not entitled to any part of his deceased wife's effects."*

The following occurred in the Court of Session in 1833. The Rev. William Blackie made certain provisions in his will, dependent on his daughter and her husband having "two children living at any time." It was held that an averment, that a child which had been born at the seventh month, "was born alive and continued to live during three quarters of an hour, and was perceived to breathe repeatedly and its heart distinctly felt to beat, but it being admitted that it had not been heard to cry, was not relevant to infer that the child was a living child."

The court was strongly urged to waive the case of Dobie and take the directions of the civil law. "The having breathed is truly the test." But on the other hand, the fixed criterion of the Scotch law was argued as alone admissible and it was so decided, although one of the judges was of a different opinion.†

The following are continental cases. "A lady of Turin, aged twenty, died intestate on the twenty-eighth of October, 1818, in the last stage of gestation, and on the tenth day of a putrid fever. Immediately after she had breathed her last gasp, at half past two, A.M. there was extracted from her, by the cæsarean operation, a child which was still alive, but which died at the end of thirteen minutes, and which was not opened after death. The husband, who was a witness of the operation, along with the surgeon who performed it, declared himself the heir of the child, resting his claims upon the declaration of the surgeon, which bore that the child had all the characters of maturity, and that it was living, which he discovered by motions of the legs and feet, which had taken place before, during, and after the operation; by the circumstance of the child's opening its hands, which were closed; by the circumstances, that on cutting the umbilical cord,

* See a Note to Dyer's Reports, 25, by the Editor John Vaillant, A. M. &c.

† Robertson v. Robertson, cases in the Court of Session, vol. 11, p. 297.

blood sprung out, and that pulsations were felt in the cord, the carotid arteries, and the region of the heart; by the circumstance, that on pouring water on the child's head in the administering baptism to it, there resulted a motion of the lips and mouth, and an impression which produced an inspiration; and lastly, by the circumstance that the natural heat remained; that after having lived about thirteen or fourteen minutes, some drops of blood came from the nose of the child; that it became pale, stretched its limbs, closed its eyes, and died. The brothers of the deceased opposed the husband in his claims; and during the procedure dependent before the Senate of Turin, some distinguished members of the medical faculty of that city proposed the following questions to the faculty of Strasburg: 1. If it be sufficiently proved by the motions of which mention is made in the above declaration, that the child in question lived a life which rendered it capable of succeeding; that it had been born capable of living, in consequence of the operation performed upon its already dead mother, and that it had really breathed? 2. If the dissection of the child's body, which had been neglected, might not have been of great assistance in determining whether the child had actually lived, and in discovering the cause of its death, which had been so quick? The faculty named a commission, composed of Professors Lauth, Lobstein, Flamant, Tourdes and Foderé; and it was unanimously decided that the first question should be answered affirmatively, and the second negatively.*

In April 1834, a female in France, supposed to be eight months advanced in pregnancy, was seized with convulsions and died. At about a quarter of an hour after her death, Dr. Cabaret performed the cæsarean operation and extracted a child. This physician swore that he saw its chest and ribs move; that there was pulsation in the umbilical cord, and also at its base, after it was cut off, and that on laying his hand on the region of the heart, he felt its beating. The body was put into a warm bath and immediately on immersion, the right hand was raised towards the head and a slight respiration ensued. After this it was motionless. Dr. Cabaret therefore considered that it had breathed, though feebly, and for a space of time not exceeding five minutes.

* From a Critical Notice of "*Anthropogenese*," by J. B. Demangeon, M. D. Paris, 1829, in *Edinburgh Journal of Natural and Geographical Science*, vol. 2, p. 198.

This testimony was confirmed by several female witnesses who were in attendance on the mother.

On the other hand, a physician swore that the child must have been dead, since he had been for eleven hours in attendance on the mother, previous to her decease, and had felt no motion in the uterus. He had however not been present at the operation.

Thirty-three days after the extraction of the child, it was disinterred and examined. The lungs were compact and of a reddish brown colour, and though the chest was arched, yet they did not fill it. The left lung was emphysematous at its upper part; there was meconium in the intestines, and the stomach and bladder were empty. The body bore all the marks of a fœtus between seven and eight months advanced. The lungs with the heart annexed on being put into a vessel of water, floated. When the heart was removed and the right lung was placed in the water, it sank, but the left floated. On cutting it into pieces, all these sank, except portions from the emphysematous part.

The question was now put to several physicians whether this state of facts proved that the child had lived. Velpeau gave an affirmative answer. The pulsations of the heart and cord and the movement of the hand showed that the blood was not motionless in its vessels. It was not, therefore, he said, dead at this period. Orfila, Dubois, Pelletan and others were of a contrary opinion. The first ascribes the condition of the left lung to the progress of putrefaction. If it had originated from independent respiration, the right lung should have contained more air than the left. The pulsation in the umbilical cord also showed that extra-uterine life was not established. Dubois remarks that it did not live, in the law sense required, since the pulsations spoken of equally take place in utero.

The court finally submitted the case to the consideration of Drs. Marjolin, Roux, and Marc, and required answers to the following questions. 1. *Whether the child had lived?* 2. *Was it born viable?* Those gentlemen commence their opinion by inquiring whether there was any thing in the disease of the mother, and the consequent operation incompatible with the surviving of the child, and after showing by numerous authorities, that there was not, although the chances were small, they next proceed to canvass the testimony.

The motion of the arm is supposed to be mechanical, owing to

the stimulus of immersion acting on the remains of fœtal life. So also with respect to what Dr. Cabaret considered to be respiration. If a child breathed ever so feebly for five minutes, it is remarkable that it raised no cry—not even those feeble sounds produced when the air penetrates only so far as the trachea. Finally the pulsations of the cord cease, as soon as respiration commences.

Having thus disposed of the testimony of Dr. Cabaret, they next proceed to consider that deduced from the dissection. The arched state of the thorax, they suggest, may have arisen from the progress of putrefaction as well as from perfect respiration and the former is rendered more probable, from the fact that the lungs did not fill the cavity of the chest. They concede that this last is not indispensable, since Schmitt of Vienna found a similar condition in a fœtus which had lived thirty-six hours, but then the other proofs of breathing must be unequivocal. The compact state of the lungs is also a circumstance against, as also their reddish brown colour, but this last is not much relied on.

As to the floating of the heart and lungs when united, they are disposed to ascribe it to the emphysema that was present. It is also possible that the progress of putrefaction might have developed gas in the heart or its vessels. All the circumstances go to prove this to be the cause and not respiration, and we know in the case of the drowned, that a small quantity of the gases induced by putrefaction is sufficient to float a comparatively heavy body. From these considerations and believing that all the indications might be referred to the remains of fœtal life, they gave it as their opinion, that the child had not breathed and consequently had not lived.

As to the second question, after noticing the appearance of the child, its weight and length (it weighed two and a half pounds and measured sixteen inches, ten lines,) the median line, about an inch above the umbilicus, the state of the nails and hair, &c. they decide that it must have been a fœtus between seven and eight months advanced and consequently that it was capable of living.*

The only American case relating to this point, that I can find, is that of *Marsellis v. Thalhimer*, which occurred in the chan-

* *Annales D'Hygiène*, vol. 19, p. 98 to 169.

cery court of this State in 1830. The widow was delivered of a full grown child two months after the death of the husband: it never breathed. On these facts, a dispute arose concerning the disposition of property. It was urged, that the child having been born, the presumption was that it was born alive, until the contrary was proved; and that a child *in ventre sa mere*, was a life in being to all intents and purposes, either as it regarded its own benefit, or that of other persons. The opposite doctrine was maintained by most of the arguments and legal enactments which I have already noticed, and the decision of the Chancellor (Walworth) was in conformity to this. "I am satisfied," says he, "from the opinion of the physician examined before the surrogate, that no court is authorized to decide affirmatively that the child was born alive. There is no legal presumption in favour of the fact; and as the mother claimed by descent from the child, she held the affirmative, and was bound to establish her right by legal proof."*

The state of infants delivered by the CÆSAREAN OPERATION, belongs also to this place; and I shall illustrate the laws of different countries respecting them, by mentioning various cases that have occurred.

A female, the wife of Matthew Braccius, died at the seventh month of pregnancy, of a violent illness; and a quarter of an hour thereafter, an infant was taken from her by the cæsarean operation. The father claimed to be its heir; and it was asserted in proof of its life, that it had opened its eyes, and made some slight motions. Zacchias was consulted on this case; and in his Opinion, he asserts that these motions were mechanical, and the

* 2 Paige's Chancery Reports, vol. 2, p. 35. I cannot be insensible to the flattering terms in which the Chancellor, in his learned opinion, was pleased to notice this work.

In 1833, the Solicitor General of England brought into Parliament, "An act for the amendment of the law relative to the estate of a tenant by the curtesy of England." In this it was provided that the husband may enjoy the wife's estate as tenant by the curtesy, although actual possession of it in his lifetime may not be had, and although there may not have been issue of the marriage. (Companion to the Newspaper, p. 55.)

This act, however, did not pass; and the law remains as it was. The laws in force in Maine and Rhode Island, as to the power of the husband to hold as tenant by the curtesy, are stated by Judge Story in Summers' Reports for the First United States Circuit, vol. 1, p. 121, *Robinson v. Codman*. Ibid, p. 263, *Stoddard v. Gibbs*.

effect of the air on the body; and this was corroborated by the fact, that after its extraction, the child was carried into a cold cellar. The decision was conformable to this opinion.* It appears, however, that the court of *Sancta Rosa* at Rome, allowed an infant to inherit, who was delivered by the cæsarean operation, and who lived for several weeks thereafter.†

In France, a similar case has been made the subject of controversy. A female, residing in the department of the Loire, died in child-bed on the 2d of July, 1780, and after her death, an infant was extracted by the cæsarean operation, which was baptised, as being alive. A law-suit was instituted on the case, and it was proved, that the infant had opened and shut its mouth for the space of half an hour—that one of its hands had been opened, and that it closed it again without assistance—that it vomited some froth—that it made several expirations like a person who is dying—and that it was perfectly well formed. It was objected, that the infant was too immature, and consequently was not viable, and of course could not succeed to property. The testimony of the witnesses was also impeached. The court, however, decided that the infant had lived, and refused to consider the question of its viability.‡

In England, a person cannot hold property as tenant by the curtesy, if the child has been delivered by the cæsarean operation. “The issue must be born during the life of the mother; for if the mother dies in labour, and the cæsarean operation is performed, the husband in this case, shall not be tenant by the curtesy: Because at the instant of the mother’s death, he was clearly not entitled, as having no issue born, but the land descended to the child, while he was yet in his mother’s womb; and the estate, being once so vested, shall not afterwards be taken from him.”§ “One Reppes, of Northumberland, took to wife an heirrix, who was great with child by him, and died in her travail, and the issue was ripped out of her belly alive; and by reference out of the chancery to the justice, they resolved, that he should not be tenant by the curtesy, for it ought to begin by the birth of the issue, and be consummated by the death of the wife.”||

* Zacchias Consilium, No. 67.

† Foderé, vol. 2, p. 163.

‡ Foderé, vol. 2, p. 164.

§ Blackstone, vol. 2, p. 128. See also Coke Littleton, 29 b.

|| Paine’s Case, 8th Coke’s Reports. I do not know that any thing can be said on the subject of the FIRST BORN OF TWINS, except the following quotation: “When the

3. The consideration of the subject, *how far deformity incapacitates from inheriting*, cannot be better introduced, than by stating the division of monsters proposed by Buffon. He separates them into three classes—monsters by excess, monsters by defect, and monsters by alteration or wrong position of parts.

Of the first class, a very remarkable instance is related in the case of twins, born at Tzoni, in Hungary, on the 16th of October, 1701. These two females were called Helen and Judith, and were separated from each other, except at the anus, where they were united, and the function pertaining to that part was performed in common. They lived to the age of twenty-two years. Judith first fell sick, but the health of Helen also became soon impaired, and the latter died three minutes after the former. They expired on the 23d of February, 1723, at Presburgh.* The

question was, which of three sons, all born at a birth, was the eldest, the declaration of a female relation, that she was at the birth, and she tied a string round the arm of the second son, in order to distinguish him, was admitted in evidence." (Starkie on Evidence, vol. 3, p. 1115.)

* See an account of this extraordinary case in the Philosophical Transactions, by J. J. Torkos, M.D. F.R.S. (vol. 50, p. 311.) A similar instance is mentioned in Piscottie's History of Scotland, p. 160. Cases of double births united at various parts, may also be found in the Philosophical Transactions, vol. 5, p. 2096; vol. 23, p. 1416; vol. 25, p. 2345; vol. 32, p. 346; vol. 45, p. 526; vol. 72, p. 44; vol. 79, p. 157. A very interesting account of a person in China, named Ake, is contained in Chapman's Journal, vol. 2, p. 148, and vol. 3, p. 78; also in Edinburgh Philosophical Journal, vol. 5, p. 133, and vol. 7, p. 126. He has a living parasite attached to him from the sternum to the umbilicus, and is, notwithstanding, able to do the work of an husbandman.

For references to numerous cases, see Lawrence's Essay on Monstrous Productions, in Medico-Chirurgical Transactions, vol. 5, p. 165. Dict. des Sciences Medicales, vol. 34. Review of J. G. St. Hilaire on Monstrosities, in Edinburgh Medical and Surgical Journal, vol. 39, p. 165. Chapman's Journal, N. S. vol. 4, p. 289, and vol. 5, p. 17. Andral's Patholog. Anatomy, vol. 1, p. 110.

For the most recent cases, see Edinburgh Medico-Chir. Transactions, vol. 2, p. 35. Case by Dr. Berry of Calcutta. It occurred near that city; both were living, and they were then three years old.

A case at Turin. This monster survived some time, and was exhibited at Paris. —(American Journal Medical Sciences, vol. 5, p. 472. Jameson's New Edinburgh Philosophical Journal, vol. 7, p. 196. Lancet, N. S. vol. 5, p. 194.)

A living duplex child in Switzerland, seen in 1829, by John Borland. (London Medical Gazette, vol. 5, p. 51. Lancet, N. S. vol. 12, p. 620.)

Case by Dr. Scoutetten, of Metz; one perfectly formed, and the other acephalous. They were both living a year after birth. This is a very curious case. (Medico-Chirurgical Review, vol. 24, p. 231.)

And in America, Dr. Horner, in American Journal of Medical Sciences, vol. 8, p. 349. North American Medical and Surgical Journal, vol. 2, p. 395. Dr. De Camp, in Boston Medical and Surgical Journal, vol. 2, p. 518. Dr. Martin, in Ohio, Western Medical and Physical Journal, vol. 3, p. 290.

Dr. Blackburn of Kentucky. Two children united from the sacrum to the coccyx, and one anus common to both. The pudenda were united—the labia were incomplete, inasmuch as there was but one for each child. They survived three weeks and died of dysentery,—one five minutes after the other. Transylvania Journal, vol. 8, p. 414.

case related by Sir Everard Home, in the Philosophical Transactions, belongs also to this division. A male child was born in Bengal, in 1793, with a well formed body, but it had a second head, placed in an inverted position on the top of the proper one. This was equally perfect, and at the age of six months, both were naturally covered with black hair. The child lived four years, and its death was owing to the bite of a *cobra de capello*. On dissection, no bone was found separating the two brains. The skulls are preserved in the Hunterian museum.*

It is barely necessary to remark, that frequent instances also occur of an increased number of organs, members, &c.

Of monsters by defect, the most remarkable are those, which are born without a head, and are hence styled *acephalous*. These live in the womb, but do not survive after birth, since the function of respiration cannot be performed. To this class also belong those which are destitute of lungs, of one or more organs of sense, &c.†

The defects of the third class are seldom discovered until after death, as they are commonly internal. They are hence seldom the subject of inquiry in legal medicine. But the most remarkable instances of this nature are those in which the rudiments, or parts of a foetus have been discovered.‡

The Siamese Twins belong to this division. In November, 1833, two children were born at Newport, Kentucky, formed exactly like the Siamese Twins. The mother had never seen these, but they were exhibited in the town, about the time she was impregnated, and she had seen wood-cuts of them. These foetuses are now in the Cabinet of the Medical College of Ohio. (Western Medical Gazette, vol. 1, p. 289.)

* Philosophical Transactions, vol. 80, p. 296, and vol. 89, p. 28.

† Edinburgh Medico-Chirurgical Transactions, vol. 2, p. 39. Case by Dr. Hastings in which the upper and lower extremities were entirely wanting. It lived six months. A curious case of deficiency in the fingers (apparently hereditary) in a whole family, is related in Edinburgh Medical and Surgical Journal, vol. 4, p. 252.

‡ The following are instances of this nature: A female named *Amidee Bissieu* in France, at whose death, at the age of fourteen, a foetus was found in the abdomen. (Edinburgh Medical and Surgical Journal, vol. 1, p. 376.) This case appears to have been recently revived, and is related by M. Breschet. (Medico-Chirurgical Review, vol. 5, p. 180. A child aged nine months, examined by G. W. Young, Esq. (Medico-Chirurgical Transactions, vol. 1, p. 194.)—A girl aged two years and a half, examined by Dr. Phillips of Andover. (Ibid. vol. 6, p. 124.)—In the London Medical Repository, (vol. 4, p. 404,) there is a reference to three other cases; and an account is also given of a foetus found by Mr. Highmore, in the abdomen of a young man who died in 1814, aged sixteen years, at Sherborne in Dorsetshire. A case is also mentioned as occurring in Austria in 1812. It is related by Prochaska. (London Medical Repository, vol. 6, p. 330.)—A child at Brannau in Austria, in 1825. (Chapman's Journal, N. S. vol. 5, p. 142.)—A case in Hanover, from Graefe's Journal. (Lancet, vol. 12, p. 454.)

Among American cases, I may mention that of Dr. Gaither, occurring in Kentucky. A female child died in 1809, at the age of two years and nine months. A

After this exposition of the condition in which monsters are generally born, we shall be enabled to apply the laws of various countries, relating to them.

As monsters by excess are *viable*, or capable of living, so, by the law of France as already quoted, they are capable of inheriting. Those by defect, and particularly the acephalous, are to be considered as still-born—incapable of living,* and this opinion must be enforced in proportion to the importance of the organs that are wanting. Concerning the last class, there can seldom be any controversy, as the mal-conformation is ordinarily not discovered until after death.

The English law is thus stated by Blackstone:—"A monster which hath not the shape of mankind, but in any part evidently bears the resemblance of the brute creation, hath no inheritable blood, and cannot be heir to any land, albeit it be brought forth in marriage; but although it hath deformity in any part of its body, yet if it hath human shape, it may be an heir." This he adds, is a very ancient rule in the law of England; and observes, that "the Roman law agrees with our own in excluding such births from succession, yet accounts them however children in some respects, where the parents, or at least the father, could reap any advantage thereby, esteeming them the misfortune, rather than the fault of that parent. But our law will not admit a birth of this kind to be such an issue, as shall entitle the husband to be tenant by the curtesy, because it is not capable of inheriting."†

As there are instances in which the issue should be male, in order to inherit, it will be proper to repeat a caution already given—not to mistake the enlarged state of the clitoris, which is very common at birth, for male organs. Foderé mentions in-

fœtus was found in the abdomen. (New York Medical Repository, vol. 13, p. 1. Coxe's Medical Museum, vol. 6, p. 193. New York Medical and Philosophical Journal and Review, vol. 1, p. 170.)—A case by Dr. Curtis in Tompkins county, New York. Child four years old. (New York Medical and Physical Journal, vol. 5, p. 202. New England Journal, vol. 15, p. 32.)

* There are, however, instances in which acephalous monsters have lived for a short time. Mr. Lawrence mentions one, which, although deficient in brain and cranium, was perfectly formed in all its other parts, and lived four days. Another is mentioned as occurring in Italy in 1831. It lived eleven hours. (Lancet, N. S. vol. 11, p. 570.) Some valuable physiological remarks on these productions, may be found in the Edinburgh Medical and Surgical Journal, vol. 11, p. 351.

† Blackstone, vol. 2, p. 246.

stances where females have, in consequence of this, been inscribed in the baptismal registers as males; and in one case, the individual was called out under the conscription law.*

As EXTRA-UTERINE FŒTUSES have never been brought forth alive, there can, of course, no question arise concerning them.†

* Foderé, vol. 2, p. 179.

† When I wrote this, I had not seen the cases mentioned in the New England Journal, vol. 8, p. 118 and 403; one by Dr. Delisle of Paris, and the other by Mr. King of South Carolina. In both instances, extra-uterine fœtuses *are said* to have been extracted, by cutting through the vagina. The first lived three quarters of an hour, and the second seems to have survived at the time when the narrative was written. Should a legal question ever occur concerning such, I presume the same provisions which are in force respecting those extracted by the cæsarean operation would guide here.

CHAPTER VIII.

INFANTICIDE.

BY JOHN B. BECK, M. D. &c. OF NEW YORK.

PART I.—History of Infanticide as it has prevailed in various nations, ancient and modern.—PART II.—Fœticide, or criminal abortion.—The period of gestation when a child ought to be considered as alive.—Signs of fœticide deduced from an examination of the female.—Where the death of the female follows the abortion.—Anatomical examination of the parts after death.—Hydatids and moles considered as occasioning all these signs.—Signs of fœticide deduced from an examination of the substance expelled from the female.—Modes in which fœticide is perpetrated.—Involuntary causes of abortion.—Circumstantial evidence.—Murder of the child after it is born alive.—Of the age of the child.—Of the child born alive without respiring.—Of the child born alive and respiring.—Proofs of the latter.—1. Proofs drawn from the circulation.—Difference between the blood of the fœtus and of the child after respiration.—Peculiarities in the organs of circulation before and after respiration—the foramen ovale—the ductus arteriosus—the ductus venosus—the umbilical vessels—the cord.—2. Proofs drawn from the respiratory organs.—Configuration and size of the thorax—situation of the lungs—their volume—their shape—their consistency or density—their absolute weight.—The static test.—Ploucquet's test.—The specific gravity of the lungs.—The hydrostatic test.—Consideration of objections to it.—Rules for applying the hydrostatic test.—3.—Proofs drawn from the abdominal organs—the liver—the intestines—the bladder.—Consideration of the general objection to these proofs, that a child may respire and yet may die before it is fully born.—General inferences in relation to the foregoing proofs.—Modes of perpetrating infanticide.—Accidental modes in which a child's life may be lost.—Congenital malformations.—Congenital diseases.—Circumstantial evidence.—Method of conducting examinations in cases of infanticide.—Cases and illustrations.—PART III.—Of infanticide in its relations to medical police.—Laws against it in different nations.—Foundling hospitals.—List of American and British cases of infanticide.

PART I.

Of the history of infanticide, as it has prevailed in different nations, ancient and modern.

It is a fact no less melancholy than astonishing, that a practice so unnatural as that of infanticide should ever have prevailed to any extent. Its existence might have been supposed possible in those unhappy regions of our earth, where untutored passion and brutal sense reign triumphant over reason and morality; but that the fairest portions of society, where genius, science, and refine-

ment had taken up their abode, should have been disgraced by a crime so disgusting, is one of those anomalies in the history of human feeling and conduct, which irresistibly prove how perfectly arbitrary and undefined are the laws of justice and humanity, when unguided by the principles of true religion. The fact, however, is not more astonishing than true. A slight review of its history will show us, that this practice prevailed in almost all the ancient nations, and that it is not even yet blotted from the list of human crimes.

The laws of Moses are silent on the subject of infanticide;* and from this circumstance we should be led to conclude that the crime was unknown among the Jews at that period of their history, and therefore that any positive prohibition of it was considered unnecessary. The penal code of the Jews is so very minute on the subject of murder in general—considers it so atrocious a crime, and denounces such terrible punishments against the perpetrators of it, that it is wholly incredible that the murder of infants would have been countenanced by their illustrious legislator. This conclusion is further confirmed by the considerations, that barrenness was esteemed one of the greatest misfortunes which could befall a Jewish woman, and that the Jews were all desirous of a progeny, because each cherished the hope that the Messiah might be numbered among his descendants. These facts would seem to prove that every inducement was held out for the preservation of children, and none to countenance their destruction.† At a subsequent period, when they became contaminated by their intercourse with the Canaanites, we find the Jews imitating‡ the example of their king Manasseh, who sacrificed his son to the idol Molech.§ These horrid sacrifices were suppressed by king Josiah, who commanded, “that no man might make his son or his daughter to pass through the fire to Molech.”|| And Tacitus, in describing the manners of the Jews of his day, says that they were not allowed to put their children to death.¶

* Commentaries on the Laws of Moses, by J. D. Michaelis, F. R. S. Translated from the German, by Alexander Smith, D. D. vol. 4.

† “Abortion and infanticide were not specially forbidden, but unknown among the Jews. Josephus, appealing in honest pride to the practice of his countrymen, reproaches other nations with these cruelties.” (Milman’s *History of the Jews*, vol. 1, p. 107. Harper’s edition.)

‡ Jeremiah, vii. 31; and xix. 5.

|| 2 Kings, xxiii. 10.

§ 2 Chronicles, xxxiii. 6. 2 Kings, xxi. 6.

¶ Hist. Lib. v. Cap. 5.

The nations surrounding the Jews appear to have been addicted to the sacrifice of children. Of these, the *Canaanites* are described as "sacrificing their sons and their daughters unto devils, and shedding innocent blood, even the blood of their sons and their daughters, whom they sacrificed unto the idols of Canaan."*

Among the *Egyptians*, infants were treated with more humanity; yet instances are not wanting of the greatest cruelty towards them. A memorable one is found in the commission of Pharaoh to the midwives, to murder all the male offspring of the Jews. Their own children, however, were treated with greater tenderness; and they are, accordingly, on this account, mentioned with honour by some of the writers of other countries. Strabo, in particular, speaks of them as an honourable exception to those nations who exercised the right of life and death over their infants.†

Among the *ancient Persians*, it was a common custom to bury children alive. Herodotus tells us of Amestris, the wife of Xerxes, who, at an advanced age, ordered fourteen Persian infants, of illustrious birth, to be interred alive, in honour of one of the deities of the country.‡

In most of the *Grecian states*, infanticide was not merely permitted, but actually enforced by law. The Spartan law-giver expressly ordained, that every child that was born should be examined by the ancient men of the tribe; and that, if found weak or deformed, it should be thrown into a deep cavern at the foot of Mount Taygetus, called *Apothetæ*, "concluding that its life could be of no advantage either to itself or to the public, since nature had not given it at first any strength or goodness of constitution."§ This practice was not, however, upheld merely by the sanction of law; it was defended by the ablest men of Greece. Aristotle, in his work on government, enjoins the exposure of children that are naturally feeble and deformed, in order to prevent an excess of population. He adds, "if this idea be repugnant to the character of the nation, fix at least the number of children in each family; and if the parents transgress the law, let it be ordained, that the mother shall destroy the

* Psalmcvi. 37 38.

† A History of Inventions and Discoveries, by John Beckmann. Translated by W. Johnston, vol. 4, p. 435.

‡ Beloe's Herodotus, vol. 4, p. 37.

§ Plutarch's Lives, translated by Langhorne, vol. 1, p. 142.

fruit of her body before it shall have received the principles of life and sensation.”* The mild Plato also justifies this practice. In his Republic, he directs that “children born with any deformity, shall be removed and concealed in some obscure retreat.”†

Of the existence of infanticide at *Athens*, we have the testimony of the comic poets, who, in describing the manners of that city, frequently allude to the exposure of children.‡

Thebes, however, exhibited a noble contrast to the rest of Greece. By one of her laws, it was expressly forbidden to imitate the other Grecian cities, who exposed their children at their birth.§

Of all the nations of antiquity, the *Romans* were the most unrelenting in their treatment of infants. The Roman father was vested with an absolute authority over the lives and fortunes of his children,|| and we have abundance of testimony to show that the right was commonly exercised. This barbarous prerogative was coeval with the existence of Rome, and continued to triumph over justice and humanity during the lapse of many ages, until Christianity wrested it from her. Romulus authorised the destruction of all children that were deformed. He, however, required the parents to exhibit them to their five nearest neighbours, and to obtain their consent to their death.¶ The law of the Twelve Tables, enacted in the 301st year of Rome, sanctioned the same barbarous practice.** After this, even the slight restrictions which Romulus had imposed upon parents, appear to have been removed, and an unqualified jurisdiction surrendered to the father over the lives of his children, even after they had arrived to years of maturity. Sallust mentions an instance of the latter. “Fuere tamen extra conjurationem complures, qui ad Catalinam initio profecti sunt: in his A. Fulvius, senatoris filius; quem retractum ex itinere, *parens jussit necari*,”—Sallust, Cat. xxxix.

* Travels of Anacharsis, vol. 5, p. 270. † Ibid. vol. 4, p. 342.

‡ Vide Quarterly Review, vol. 2, p. 389, for quotations from Terence and Plautus.

§ Travels of Anacharsis, vol. 3, p. 277.

|| The right of parents over their children is thus stated in the Institutes of Justinian, Lib. 1, Tit. ix. p. 22, Cooper's edition. Jus autem potestatis, quod in liberos habemus, proprium est civium Romanorum; nulli enim alii sunt homines, qui talem in liberos habeant potestatem, qualem nos habemus.

¶ Montesquieu's Spirit of Laws, vol. 1, p. 104. London,

** Cooper's Justinian, p. 659.

The procuring of *abortion*, which can be considered no less than murder, was also notoriously prevalent among the Romans. Juvenal thus speaks of that nefarious practice :

Hæ tamen et partus subeunt discrimen et omnes
Nutricis tolerant, fortuna urgente, labores
Sed jacet aurato vix ulla puerpera lecto ;
Tantum artes hujus, tantum medicamina possunt.*

Juv. Sat. vi. 476.

Minucius Felix thus describes the barbarity of the Romans in this respect : “ I see you exposing your infants to wild beasts and birds, or strangling them after the most miserable manner. Nay, some of you will not give them the liberty to be born, but by cruel potions procure abortion, and smother the hopeful beginning of what would come to be a man, in his mother’s womb.”† Pliny, the elder, himself defends the right of parents to destroy their children, upon the ground of its being necessary to preserve the increase of population within proper bounds.

Such was the practice of ancient Rome from the first origin down to the time of Constantine the Great. During the days of her greatest political grandeur, it was carried to the highest excess ; and whilst she was boasting of her refinement, and casting the opprobrious epithet of barbarian on all around her, she was guilty of the basest profligacy, and the most hardened cruelty. Christianity first opposed a barrier to the desolations of this crime ; her mild and humane spirit could not but discountenance it ; and accordingly it animated all who were arrayed under her peaceful banners, to exert their energies in arresting its progress. The Christian writers of that day are full on this point. Tertullian, in his *Apology*, expresses himself with heroic boldness on the subject : “ How many of you,” (addressing himself to the Roman people, and to the governors of cities and provinces,) “ might I deservedly charge with infant murder ; and not only so, but among the different kinds of death, for choosing some of

* “ Yet these, though poor, the pain of childbed bear,
And without nurses their own infants rear.
You seldom hear of the rich mantle spread
For the babe, born in the great lady’s bed.
Such is the power of herbs ; such arts they use
To make them barren, or their fruit to lose.”

† Octav. Minucii Felicis, ch. xxx.

the cruelest for their own children, such as drowning or starving with cold or hunger, or exposing to the mercy of dogs; dying by the sword being too sweet a death for children, and such as a man would choose to fall by, sooner than by any other ways of violence. But Christians now are so far from homicide, that with them it is utterly unlawful to make away a child in the womb, when nature is in deliberation about the man; for to kill a child before it is born, is to commit murder by way of advance; and there is no difference, whether you destroy a child in its formation, or after it is formed and delivered; for we Christians look upon him as a man who is one in embryo; for he is a being like the fruit in blossom, and in a little time would have been a perfect man, had nature met with no disturbance.”* In A. D. 315, Constantine the Great enacted a law, providing for the maintenance and education of those children whose parents were too poor to do the same.† He also ordered a severe punishment to be inflicted on a cruel father. This was the first time that the authority of the government had interposed to arrest this crime; and it is not to be supposed, that a custom which had become so familiar to all the habits and feelings of the Roman people would be immediately suppressed; and accordingly we find that it still continued to prevail, though in a less degree, until the end of the 4th century, when it was finally exterminated by the emperors Valentinian, Valens, and Gratian.‡

The *Phenicians* and *Carthaginians* were in the habit of sacrificing infants to their gods. The latter had a law by which four children of noble birth were regularly immolated upon the altars of Saturn.§ History records a melancholy instance of the superstition and cruelty in these deluded people. It is related, that

* Reeves' Apologies, &c. vol. 2, p. 190. † Ant. Univ. Hist. vol. 15, p. 576.

‡ Mr. Gibbon thus expresses himself in relation to this practice among the Romans: “But the exposition of children was the prevailing and stubborn vice of antiquity; it was sometimes practised, often permitted, almost always practised with impunity, by the nations who never entertained the Roman ideas of parental power; and the dramatic poets, who appeal to the human heart, represent with indifference a popular custom which was palliated by the motives of economy and compassion. If the father could subdue his own feelings, he might escape, though not the censure, at least the chastisement of the laws. And the Roman Empire was stained with the blood of infants, till such murders were included by Valentinian and his colleagues, in the letter and spirit of the Cornelian law.” (The History of the Decline and Fall of the Roman Empire—by Edward Gibbon, Esq.—vol. 3, p. 186, Lond. Ed.)

§ Ant. Univ. Hist. vol. 17, p. 257.

they attributed their defeat by Agathocles, king of Sicily, to an omission of these sacrifices, and in order to atone for their past neglect, they offered up, at one time, two hundred of the sons of their nobility.

Silius Italicus notices this custom :

“Mos fuit in populis, quos condidit Advena Dido,
 Poscere cæde deos veniam, ac flagrantibus aris
 (Infandum dictu) parvos imponere natos.” *Lib. 4.*

The *ancient Germans*, although in the habit of sacrificing prisoners taken in battle, do not appear to have been addicted to the crime of infanticide. Tacitus, in describing their manners, mentions a contrary practice as one of the peculiarities distinguishing their character: “Numerum liberorum finire, aut quemquam ex agnatis necare, flagitium habetur.”*

Among the *Visigoths*, the murder of infants was a common crime. Chindaswinthus, one of their kings, in his laws, describes the procuring of abortion, as well as the murder of children after they are born, as practices that were prevalent in the provinces, and denounced severe penalties on the perpetrators of those crimes.†

But *infanticide* was not confined to the ancients. It has descended to modern nations, and at the present day disgraces Eastern and Southern Asia by its enormities.

The *Chinese* are notorious for their cold indifference in the exposure and murder of their children. According to Mr. Barrow, the number of children exposed in Pekin alone amounts to 9000 annually. No law exists to prevent it; on the contrary it appears rather to be encouraged, inasmuch as persons are employed by the police of the city to go through the different streets every morning in carts, to pick up all the children that may have been thrown out during the night. “No inquiries are made; but the bodies are carried to a common pit without the walls of the city, into which all, whether dead or living, are promiscuously thrown.”‡ The practice is not confined to the capital; it prevails also in other parts of the country. It is calculated that the number of infants destroyed in Pekin, is about equal to that of all the rest

* De Morib. Germ. xix.

† On the history of the effects of religion upon mankind. By Rev. Edward Ryan. p. 110.

‡ Travels in China, &c. by John Barrow, Esq., p. 113. (American edition.)

of the empire.* Almost all those that are exposed are females. The causes assigned for its prevalence, are extreme poverty, arising from an overgrowth of population; frequent and dreadful famines, springing from the same cause; the natural coldness of affection in the Chinese, together with the sanction of custom, and the want of any law forbidding it. Mr. Ellis, who visited China with the British embassy in 1816, expresses some doubts with regard to the frequency of infanticide in China.† Whether the estimate of Barrow be too large or not, it is impossible to say. The general prevalence of the crime, however, is unquestionable; and recent travellers speak of it as still existing in all its horrid deformity. “At the beach of Amoy,” says Mr. Gutzlaff, “we were shocked at the spectacle of a pretty new-born babe, which shortly before had been killed. We asked some of the by-standers what this meant; they answered with indifference, ‘it is only a girl.’” This same traveller says, “It is a general custom among them to drown a large proportion of the new-born female children. This unnatural crime is so common among them, that it is perpetrated without any feeling, and even in a laughing mood; and to ask a man of any distinction whether he has daughters, is a mark of great rudeness. Neither the government, nor the moral sayings of their sages, have put a stop to this nefarious custom.”‡ The same writer, in another work, makes the following statement: “Infanticide, of which the husbands are the only perpetrators, is not uncommon; but female children only are murdered, and then immediately after their birth. This horrible crime meets with no punishment from the laws of the country; a father being the sovereign lord of his children, he may extinguish life whenever he perceives or pretends that a prolongation of it would only aggravate the sufferings of his offspring.”§ Another late traveller says, “In some provinces, not one out of three is suffered to live; and in others, as the writer has been informed by the Chinese from those places,

* Ibid. p. 114. Also De Pauw's *Philosophical Dissertation on the Egyptians and Chinese*. (*Quarterly Review*, vol. 2, p. 255.)

† *Journal of the Proceedings of the late Embassy to China, &c.* By Henry Ellis, third commissioner of the embassy. Vol. 2, p. 209. London 1817.

‡ *Journal of Three Voyages along the coast of China, in 1831, 1832 and 1833; with Notices of Siam, Corea, and the Loo-Choo Islands.* By Rev. Charles Gutzlaff. p. 142. (American edition.)

§ *A sketch of Chinese History, Ancient and Modern, &c.* By Rev. Charles Gutzlaff. Vol. 1, p. 46. (American edition) 1834.

the difference between the male and female population is as ten to one.”*

Among the *Hindoos*, infanticide presents itself in a form still more horrible. It is incorporated into their system of religion, and its atrocities are beyond description. It has existed among them for at least 2000 years, for Greek and Roman historians notice it, and refer to some of the very places where it is now known to exist.† The number of infantile murders in the provinces of Cutch and Guzerat alone, amounted, in 1807, according to the lowest calculation, to 3000 annually; according to another computation, 30,000.‡ Females are almost the only victims. In defence of the practice, they urge the difficulty of rearing female children, the expense attending their education, and the small probability of their ever being married.§ Within a few years, through the benevolent exertions of some of the subjects of Great Britain, it was supposed that infanticide had been completely abolished in many of the provinces. Mr. Duncan, governor of Bombay, Marquis Wellesley, and Col. Walker, were the persons who took the lead in this affair, and whose energy and perseverance it was hoped and asserted had been crowned with complete success.|| It is melancholy to be obliged to state, on the authority of a recent traveller, that the benevolent labours of these gentlemen were attended with only temporary success. Bishop Heber, in his travels in 1824 and '5, says, “Through the influence of Major Walker, it is certain that many children were spared; and previous to his departure from Guzerat, he

* See a Journal of a Residence in China, &c. from 1829 to 1833. By Rev. David Abel, pp. 128, 158. New York, 1834.

† Christian Researches in Asia. By the Rev. Claudius Buchanan, D. D. English edition, p. 49.—View of the History, Literature, Religion, &c. of the *Hindoos*. By William Ward, D. D. p. 393. American edition.—Also Moor's *Hindu Infanticide*, &c. Review of the same in *London Quarterly Review*, vol. 6, p. 210.

‡ Buchanan's *Researches in Asia*, p. 49. Also Moor's *Hindu Infanticide*, p. 63.

§ The modes of perpetrating the deed are various. Dr. Buchanan states that two are principally prevalent. As soon as it is known to be a female, a piece of opium is put into its mouth; or the umbilical cord is drawn over its face, which, by preventing respiration destroys it. (*Researches in Asia*, p. 47. Moor's *Hindu Infanticide*, p. 55, 56.)—Another mode still more common, however, is to drown the child, as soon as it is born and ascertained to be a female, in a large vessel of milk placed in the room for that purpose. Moor's *Hindu Infanticide*, p. 27. Heber's *Travels*, vol. 2, p. 70. American edition.)

|| For a full account of these measures, see “*Hindu Infanticide: an account of the measures adopted for suppressing the practice of the systematic murder, by their parents, of female infants; with incidental remarks on other customs peculiar to the natives of India.*” Edited with notes, and illustrations, by Edward Moor, F. R. S. London, 1811. 4to. In this volume, the report of Lieut. Col. Walker is particularly interesting.

received the most affecting compliment which a good man could receive, in being welcomed at the gate of the palace, on some public occasion, by a procession of girls of high rank, who owed their lives to him, and who came to kiss his clothes, and throw wreaths of flowers over him as their deliverer and second father. Since that time, however, things have gone on very much in the old train, and the answer made by the chiefs to any remonstrances of the British officers, is, ‘Pay our daughters’ marriage portion, and they shall live.’ Yet these very men, rather than strike a cow, would submit to the cruelest martyrdom.”*

Previously to the conversion of *Otaheite* to Christianity, infanticide was so common that it threatened the complete depopulation of the island. It was found as a common practice, when the island was visited by Captain Cook;† and just anterior to the introduction of Christianity, according to the most accurate estimates, at least two-thirds of the children born were destroyed.‡ It appears to have been confined to no rank or class of the community, but to have been universally prevalent. Mr. Ellis states, that he did “not recollect having met with a female in the island, during the whole period of his residence there, who had been a mother while idolatry prevailed, who had not imbrued her hands in the blood of her offspring.”§ The effect which this practice had in diminishing the number of inhabitants, was astonishing, and affords a strong fact in refutation of the doctrine which has been maintained by some, that the practice of destroying children has a direct tendency to augment population. In 1776, when Captain Cook visited the island, he found it to contain upwards of 200,000 souls. In less than thirty years after, this terrestrial paradise, blessed with a genial climate and a luxuriant soil, was reduced to 5000 inhabitants.|| Turnbull relates, that “the missionaries made two tours whilst he was in the island, and in each of which they numbered the people; according to the first calculation they were 7000, but in the last they very little exceeded 5000.”¶ It is not to be supposed that this enormous diminution of population

* Narrative of a Journey in the Upper Provinces of India, &c. By the Right Rev. Reginald Heber, D. D. Vol. 2, p. 70. American edition.

† Cook’s Voyages, vol. 2, p. 72, 85.

‡ Turnbull’s Voyage round the World in 1800-2-3-4. Polynesian Researches, by William Ellis, vol. 1, p. 198. American edition.

§ Polynesian Researches, vol. 1, p. 198.

|| Turnbull, vol. 3, p. 77.

¶ Turnbull, vol. 3, p. 76-8.

is to be attributed solely to this cause; others have doubtless co-operated, particularly certain diseases which prevail to a great extent, such as fevers, dysentery, phthisis pulmonalis, and scrofula.* All travellers, however, who have visited the island, concur in the opinion, that the effects of infanticide have been infinitely more injurious to the population than all the other causes combined. It is consoling to reflect, that through the exertions of Christian philanthropy, this horrid and barbarous custom has been entirely abolished.

In most of the *South Sea Islands*, the same practice has prevailed to an enormous extent, and has only been checked by the benign influence of Christianity.†

Among the *Sandwich Islanders*, however, there is reason to believe that it still exists in much of its native deformity. Sometimes they strangle their children, but more frequently bury them alive. What is peculiar in the barbarity of these people, is, that even should a child be spared for a few weeks or months, they have no hesitation in destroying it at any subsequent period. Among the *Otaheiteans*, on the contrary, if the child survived only a few hours, it was generally saved. At least two-thirds of the children born, are here also sacrificed.‡ The principal cause assigned for the prevalence of this crime among these people, is their excessive indolence, and their dread of the trouble to be encountered in rearing their children.§ Among the *Society Islands*, the rules of the Areoi Institution requiring the death of all the children of its members, operated as another powerful cause.

Among the natives of the interior of *Ceylon*, the same inhuman practice prevails. When a child is born, an astrologer is consulted to foretel its future fortune; if it should be unhappy it is carried to the jungle and abandoned, where it is destroyed by cold, or devoured

* Edinburgh Medical and Surgical Journal, vol. 2, p. 284.90.

† For interesting notices on this subject, see *Journal of Voyages and Travels* by the Rev. Daniel Tyerman, and George Bennet, Esquire, vol. 1, p. 53; vol. 2, p. 67, 162. (American edition.)—Also *Polynesian Researches*, by W. Ellis, vol. 2, p. 29, &c.

‡ *Polynesian Researches*, vol. 4, p. 240. Stewart's *Journal of a Residence in the Sandwich Islands*, p. 185, 251.

§ A recent American voyager says, that in the Sandwich Islands "Infanticide is still practised, but not to the same extent as formerly, nor is the deed committed openly. At the imminent peril of the mother, children are now destroyed about the fourth or fifth month of utero-gestation, almost entirely in cases of illegitimacy, and but very rarely after birth. Infanticide has been made a crime by the civil law; and it is hoped, that the people will soon feel it to be an offence, equally against social and moral rectitude, as well as detrimental to their political condition." A voyage round the world, in 1835-6 and 7, by W. S. W. Ruschenberger, M. D. 1838.

by wild beasts. Generally speaking, all the male children, as well as the first female child, are exempted from this unhappy lot. So common is the destruction of all the rest of the female offspring, that "it has been observed, in the districts where this practice prevails, that more than one female child is rarely to be found in a family."* The effect of this practice upon the relative proportion of male and female population, is very striking. According to the calculation of Mr. Marshall, the females are to the males as 84 to 100; while in England they are as 98.8 to 100.† The only extenuation offered for this crime, is the extreme poverty of the people. Bishop Heber, in speaking of the prevalence of infanticide in Ceylon, states that in the last general census in 1821, the number of males exceeded by 20,000 that of females; in one district there were, to every hundred men, but fifty-five women; and in those parts where the numbers were equal, the population was almost exclusively mussulman.‡ The difficulty of marrying their daughters, in a country where to live single is disgraceful, is one of the principal causes according to Heber, of this unnatural custom.§

The natives of *New South Wales*, resort to violent and unnatural compression of the body of the mother, in order to procure abortion. This process is called by them *Mee-bra*, and is resorted to for the purpose of avoiding the trouble of carrying about the child when young, a duty which devolves entirely on the female. As may naturally be supposed, the mother not unfrequently falls a victim in this horrid process. Another practice still more shocking prevails, of burying a child with its mother, if she happens to die.|| This practice is justified by them, upon the ground of the difficulty, and even impossibility of nursing and rearing a child under these circumstances.

Among the *New Zealanders*, infanticide is asserted to be a com-

* Notes on the Medical Topography of the Interior of Ceylon. By Henry Marshall, Surgeon to the Forces. pp. 22, 33, 37. London, 1821. † Ibid. p. 33.

‡ Narrative of a Journey through the Upper Provinces of India, with notes upon Ceylon, &c. &c. By the late Right Rev. Reginald Heber. Vol. 2, p. 197. American edition.

§ "An astrologer is consulted on the birth of a female child; and if he pronounces her to have been born under evil auspices, she is exposed alive in the woods, to be destroyed by beasts of prey or by ants—generally, I was happy to hear, without the consent of the mother." Ibid. vol. 2, p. 197.

|| Account of the English Colony of New South Wales. By Lieut. Col. Collins, of the Royal Marines. p. 124—5. Edinburgh Review, vol. 2, p. 34.

mon occurrence. When a girl is born, it is said the mother not unfrequently destroys it, "by pressing her finger upon the soft part between the joinings of the skull."*

Among the *Hottentots*, infanticide appears to be a common crime. Sparman states "that the *Hottentots* use, in case of the mother's death, to bury alive children at the breast;"† and Barrow describes a race of them called *Bojesmans*, who destroy their offspring on various occasions: as "when they are in want of food; when the father of the child has forsaken its mother; or when obliged to fly from the boors and others; in which case they will strangle them, smother them, cast them away in the desert, or bury them alive."‡

The *Mahometans* do not appear to attach any criminality to child-murder;§ on the contrary, the very sources of honour and authority among them are polluted by it. Even the palace of the Sultan is constantly stained by the blood of infants. Thornton states, that the offspring of the younger princes of the royal family, who are kept in honourable confinement in the palace, are destroyed as soon as they are born.|| And Blacquiere accounts for the smallness of the number of children belonging to the Bashaw of Tripoli, from the fact of his encouraging his wives to evade their accouchements.¶ A recent traveller says, that the Turkish women after getting two or three children, or as many as suits their fancy to have, are addicted to procuring miscarriages, at which they or their accouchesses (*Jewesses*) are exceedingly expert, not producing constitutional injury.**

Dr. Bryce, in speaking of the present state of medicine at Constantinople, says: "Midwifery is almost exclusively practised by Jewish and Turkish women; and it is worthy of remark, that the obstetric art forms a very small portion of their

* The Library of Entertaining Knowledge, *New Zealanders*, p. 387. Cruise's Journal, p. 290.

† A Voyage to the Cape of Good Hope, &c. from the year 1772 to 1776, by Andrew Sparman, M. D. vol. 1, p. 257.

‡ An Account of a Journey in Africa, made in the years 1801 and 1802, to the residence of the Booshuana Nation, &c. by John Barrow, Esq. p. 378-91.

§ It is proper to state, however, that the Koran forbids it; and in the oath which Mahomet required of the women who joined his party, called the "women's oath," the prohibition of infanticide was distinctly mentioned. (Buck's Theological Dictionary, Art. *Mahomet*.)

|| The present state of Turkey, &c. by T. Thornton, Esq. vol. 1. p. 120.

¶ Letters from the Mediterranean, by E. Blacquiere, Esq. vol. 1, p. 90.

** Records of Travels in Turkey, Greece, &c. in the years 1829, 1830 and 1831, by Adolphus Slade, Esq. vol. 2, p. 162. American edition.

adroitness or employment. All pretend to possess, and some have become famous and wealthy by their pretensions, certain means, not only to obviate sterility, but also to produce abortion by administration of drugs—a practice, avowedly tolerated, and frequently resorted to, by Turkish females, both from their dislike to frequent pregnancy, and from command of their lords, when their harem threatens to become too numerous.”*

In *modern Egypt*, nothing is more common than the procuring of abortion. A class of females, well known for their skill, are employed to aid those who consult them in cases of this kind. This practice, which is very ancient, surprises nobody, and a woman aborts with astonishing indifference. In the towns and villages, there are individuals who are specially employed in this barbarous business. At Cairo, there are Arabian physicians, who for a great length of time, have followed this infamous trade. Infanticide is rarely made a subject of criminal investigation. When a married woman destroys her new-born infant, in order to bring her to punishment, two eye-witnesses are necessary. If she is convicted, she has to pay a large sum of money as a fine to her husband, or if she is unable to do this, he has it in his power to imprison her. If there are nothing but suspicions and she persists in denying the crime, she is only obliged to take a certain oath, to free herself. When a girl who may have become pregnant, destroys her child, to exculpate herself from the crime, she has only to liberate a male or a female slave.†

Even in *Iceland*, we find traces of this inhuman crime. The custom appears to have been derived from their Norwegian ancestors, among whom it continued to prevail for nearly one hundred years after it had been abolished in Iceland. It became extinct shortly after the introduction of Christianity into the island, which event took place at the end of the tenth century.‡

If we turn our attention from the OLD WORLD, and direct it to

* Sketch of the State and Practice of Medicine at Constantinople, by C. Bryce M. D. (Edin. Med. and Surg. Journal, vol. 35, p. 8, 9.)

† See a Letter on the State of Legal Medicine in Egypt, by Hamont, Directeur of the Veterinary School of Medicine, of Abon-Zabel, in the *Annales d'Hygiène Publique et de Médecine Légale*, vol. 10, p. 202-3.

‡ Dr. Holland's Preliminary Dissertation on the History and Literature of Iceland, in Sir G. Mackenzie's Travels in the Island of Iceland, during the summer of the year 1810, Edinburgh, 2d Ed. p. 39.

the NEW, we shall find this crime presenting itself under forms no less horrible and disgusting.

Among the natives about *Hudson's Bay*, it is common for the women to procure abortion by the use of a certain herb which grows there.*

In *Labrador*, the Moravian missionaries who first landed there, found it a prevailing custom to put to death their widows and orphans; not to gratify a natural ferocity of disposition, but merely on account of a supposed inability to provide the means of support for the helpless orphan or the desolate widow of another. By the exertions of the missionaries, the practice was arrested.†

Nor were the savages of these inclement regions the only people who were guilty of this horrid crime. The gloomy superstition of the *Mexicans* delighted in human sacrifices, and the altars of their divinities were continually drenched with the blood of infants and of men.‡ The number of these sacrifices has doubtless been exaggerated, but the fact is unquestionable, that countless victims poured forth their lives to appease or conciliate their imaginary deities.

The mothers in *California* are described as voluntarily destroying their offspring. Venegas states that the common cause of it was a scarcity of food, and that the practice was put a stop to by the Father *Salva-Tierra*, who ordered a double allowance to be given to women newly delivered.§

Charlevoix describes a race of savages in North America, who make a practice of destroying all infants who are so unfortunate as to lose their mothers before they are weaned; at the same time, they inter alive all the other children, upon the plea that no other female can nurse them properly.||

The *Peruvians*, whom Dr. Robertson eulogizes for the mildness of their manners, and the benevolent spirit of their religion,¶ were nevertheless in the habit of sacrificing children. Acosta tells us, that in such cases as the sickness of the Inca, or doubtful success in war and other affairs, ten children were sacrificed;

* Ellis's *Voyage to Hudson's Bay*, p. 198.

† Barrow's *Account of a Journey in Africa in 1801 and 2.* (Edinburgh Review, vol. 8, p. 438.)

‡ Robertson's *History of America*, vol. 3, p. 325.

§ History of California, by Miguel Venegas. London, 1759. Vol. 1, p. 82.

|| Journal d'un Voyage à L'Amérique Septentrionale, par. le P. De Charlevoix. A Paris, 1744. Vol. 3, p. 368.

¶ History of America, vol. 3, p. 335.

and upon the coronation of the Inca, two hundred were offered up. When a Peruvian father was taken sick, he sacrificed his son to *Viriachocha*, (the sun,) beseeching him to accept the life of his child, and to save his own. The same writer, when comparing the Peruvians and Mexicans, describes the former as exceeding the latter in the sacrificing of *children*; while the latter were chiefly addicted to the sacrifice of *men* taken in battle, of whom they murdered an immense number. Robertson endeavours to rescue them from this charge, by invalidating the testimony of Acosta. He cannot, however, help confessing that the practice did prevail among "their uncivilized ancestors;" but he adds, "that it was totally abolished by the Incas, and that no human victim was ever offered in any temple of the sun." He admits, moreover, that "in one of their festivals, the Peruvians offered cakes of bread moistened with blood drawn from the arms, the eyebrows and noses of their children. This rite may have been derived," he says, "from the ancient practice in their uncivilized state, of sacrificing human victims."*

Besides those that have been enumerated, travellers record the names of other tribes and nations inhabiting this vast continent, who murder their children with impunity and without remorse. They tell us of the *Abiponians*, a migratory race, inhabiting the province of Chaco in Paraguay, among whom mothers have been known to destroy all their children as soon as they were born;† and of the *Araucanians*, a powerful nation of Chili, who permit fathers and husbands to kill their children and wives.‡

To the honour of our *North American Indians*, it deserves to be mentioned, that they are not known to be guilty of this horrid crime. Mr. Heckewelder, in his interesting account of the Indians who inhabited Pennsylvania and the neighbouring states, says, "I have never heard of any nation or tribe of Indians who destroyed their children, when distorted or deformed, whether they were born so, or come to be so afterwards."§ To the same effect are the testimonies of Captain Franklin and Dr. Richardson, both of whom represent infanticide as an exceedingly rare occur-

* History of America, vol. 3, p. 429. † Edinburgh Encyclopedia, Art. *Abiponians*.

‡ Ibid. Art. *America*.

§ A Narrative of the Mission of the United Brethren among the Delaware and Mohegan Indians, from its commencement in the year 1740, to the close of the year 1808, &c. By John Heckewelder, who was many years in the service of that mission. 8vo. p. 516. Philadelphia.

rence, and when an occasional instance of it takes place, is looked upon by them as a crime of the greatest magnitude. Dr. Richardson, in his interesting account of the Cree Indians, in giving their belief in relation to a future state, says that it is a crime which they believe to be punished hereafter. "Women who have been guilty of infanticide, never reach the Mountain (the Indian Heaven) at all, but are compelled to hover round the seats of their crimes, with branches of trees tied around their legs."*

But it is unnecessary to extend this sketch any further. Enough has been recorded to give a view of the wide-spread desolations of this unnatural crime; certainly too much for the honour of human nature.

PART II.

By **INFANTICIDE** in its most extensive signification, is understood, the criminal destruction of the fœtus in utero, or of the child after it is born. It embraces, therefore, two subjects, somewhat distinct, and which require separate discussion.

1. *Of the murder of the fœtus in utero, with an account of its various proofs and modes of perpetration.*

This is usually called *criminal abortion*. Recently the more appropriate and classical term of *fœticide* has been applied to it. In the following essay, these terms will be used indiscriminately.

In every instance in which a reputed case of fœticide becomes the subject of legal investigation, the great points which present themselves are the following:

1. Has the fœtus in utero been actually destroyed?
2. Has this been brought about by *criminal means*, or by *accidental and natural causes*?

These are the questions concerning which the opinion and testimony of the professional witness will be required; and these, therefore, are the subjects which it becomes necessary specially to examine. Before proceeding, however, to the discussion of these points, it becomes necessary to settle a prelimi-

* Journey to the Shores of the Polar Sea, in 1819-20-21-22. With a Brief Account of the Second Journey, in 1825-26-27. By John Franklin, R. N. Vol. 1, p. 151. London, 1829.

nary question of great importance, and which is to determine, if possible, the period of gestation when the fœtus is to be considered as endowed with life.

In reviewing the various opinions which have been advanced on this subject at different periods, it will abundantly appear, that too often fancy has usurped the prerogative of reason, and idle speculation been substituted in the place of rational investigation. The consequence has been, that doctrines have been promulgated, not only the most erroneous and absurd in their nature, but the most dangerous in their tendencies to the best interests of society.

The ancients were by far the most extravagant in their notions on this subject. The same fundamental error, however, pervaded all their theories. They believed that the sentient and vital principle was not infused into the fœtus, until some time after conception had taken place. It is not surprising that the exact time at which this union is effected, could never be satisfactorily settled by them. According to *Hippocrates*, the male fœtus became animated at thirty days after conception; while the female required forty-two.* In another part of his works, he asserts that this does not occur until the perfect organization of the fœtus.

The *Stoics* believed that the soul was not united to the body before the act of respiration, and consequently that the fœtus was inanimate during the whole period of utero-gestation.† This doctrine prevailed until the reigns of Antoninus and Severus, when it gave way to the more popular sentiments of the sect of the *Academy*, who maintained that the fœtus became animated at a certain period of gestation. The *Canon Law* of the Church of Rome also distinguished between the animate and inanimate fœtus, and punished the destruction of the former with the same severity as homicide.‡

Galen considered the animation of the fœtus to take place on the fortieth day after conception, at the same time that he supposed the fœtus to become organized.§ Others believed shorter periods sufficient; and accordingly three days and seven respectively had their advocates.|| Another contended that eighty days were requisite for the animation of the female, while only

* Lib. de Nat. Puer. Num. 10. † Plutarch's *Morals*, vol. 3, p. 230. London.

‡ *Zacchiæ Quæst. Med. Leg.* lib. ix. tit. 1, 2, 5, p. 744.

§ *Opera Galeni, de Usu Part.* lib. 15, cap. 5. Lugduni, 1643.

|| *Zacchiæ*, lib. 1, tit. 2, Q. x. p. 82.

forty were necessary for the male.* Others again made a distinction between the imperfect embryo and the perfectly formed fœtus, and considered abortion of the latter only as a crime deserving the same punishment as homicide; a distinction, of which it is justly remarked by a celebrated writer on medical jurisprudence, “ennemie de la morale et de l’humanité, digne de l’ignorance et des préjugés de ses auteurs.”†

Amidst these discordant sentiments, Zacchias offers himself as a mediator, and proposes sixty days as the limit; and recommends that any one who should cause an abortion after that period, whether of male or female, should be punished for homicide.‡

All the foregoing opinions, wholly unsupported either by argument or experiment, might be dismissed without a comment, were it not to point out the evils to which they have given rise. It may be said of them with perfect truth, that their direct tendency has been to countenance, rather than to discourage the destruction of the fœtus, at least in the earlier stages of pregnancy. On a subject of this nature, it was to be supposed that legal decisions would be influenced in a great measure by the opinions of philosophers and physiologists; and accordingly, while the delusion of the Stoics continued its sway, the law could view nothing very criminal in wilful abortion,§ as the fœtus was considered merely *portio viscerum matris*.|| And afterwards, when the doctrines of the Academy were prevalent, punishments very different, in the degree of their severity, were inflicted, according as the abortion was supposed to be that of an animate or inanimate fœtus.¶

In times more modern, an error no less absurd, and attended with consequences equally injurious, has received the sanction, not merely of popular belief, but even of the laws of many civilized countries. The error consists in denying to the fœtus any vitality until after the time of quickening. The codes of almost every civilized nation have this principle incorporated into them; and accordingly, the punishment which they denounce against abortion procured after quickening, is much severer than before. The *English law* “considers life not to commence before the in-

* Zacchiæ, lib. 1, tit. 2, Q. x. p. 82.

† Zacchiæ, lib. 1, tit. 2, Q. x. p. 83.

‡ Plutarch's *Morals*, vol. 3, p. 230.

† Foderé, vol. 4, p. 484.

§ Foderé, vol. 4, p. 382.

¶ Foderé, vol. 4, p. 382.

fant is able to stir in its mother's womb,"* and by a recent law the procuring of abortion *after quickening*, is punished with death, while the same crime, *anterior to quickening*, is only viewed as felony. In *Saxony*, in consequence of the disputes of medical men on this subject, it was formally decided, that the fœtus might be esteemed alive after the half of pregnancy had gone by.†

The absurdity of the principle upon which these distinctions are founded, is of easy demonstration. The fœtus, previous to the time of quickening, must be either dead or living. Now, that it is not the former, is most evident from neither putrefaction nor decomposition taking place, which would be the consequences of an extinction of the vital principle.‡ To say that the connexion with the mother prevents this, is wholly untenable: facts are opposed to it. Fœtuses do actually die in the uterus before quickening, and then all the signs of death are present. The embryo, therefore, before that crisis, must be in a state different from that of death, and this can be no other than life.

But if the fœtus enjoys life at so early a period, it may be asked, why no indications of it are given before the time at which quickening generally takes place? To this it may be answered, that the absence of any consciousness on the part of the mother, relative to the motions of the child, is no proof whatever that such motions do not exist. It is a well known fact, that in the earlier part of pregnancy, the quantity of the liquor amnii is much greater in proportion to the size of the fœtus, than at subsequent periods. Is it not, therefore, rational to suppose, that the embryo may at first float in the waters without the mother being conscious of its movements, but that afterwards, when it has increased in bulk, and the waters are diminished in proportion, it should make distinct and perceptible impressions upon the uterus? Besides, it should not be forgotten, that fœtal life at first must of necessity be extremely feeble, and therefore it ought not to be considered strange that muscular action should also be proportionably weak.

* Blackstone, vol. 1, p. 129.

† Specimen Juridicum Inaugurale, Auctore Van Visvliet, p. 46. Lugduni Batavorum, 1760.

‡ Some very curious and interesting cases are recorded in which the dead fœtus has been retained for a certain period in the uterus without undergoing actual decomposition. See a case by J. G. Porter, M. D. in American Journal of Med. Sciences, vol. 17, p. 347, and another by the Editor of the same work, Dr. Hays, vol. 20, p. 535. These, however, are exceptions to a general rule, and do not invalidate the reasoning in the text.

But granting, for the sake of argument, that the fœtus does not stir previously to quickening, what does the whole objection amount to? Why, only that one evidence of vitality, viz. motion, is wanting; and we need not be told that this sign is not essential to the existence of life.*

The *incompleteness* of the embryo previous to quickening, is no objection to its *vitality*. Life does not depend upon a complication of organs; on the contrary, it is found that some of the simplest animals, as the polypi, are the most tenacious of life. Besides, upon this principle, vitality must be denied to the child after birth, because many of its bones, as well as other parts of its body, are imperfect.

Nor is the *want of organic action* any argument against this doctrine. Life appears to depend essentially as little upon organic action, as it does upon a complication of organs. If it did, the fœtus, after quickening, would be just as destitute of life as before, for its brain, lungs, stomach, and intestinal canal, perform no more action at the eighth month than they do at the third. But if organic action be essential to life, how are we to account for those singular cases of fœtuses born alive, and yet destitute of some of the most important organs in the body?†

The observations of physiologists tend also to prove the vitality of the fœtus previously to quickening. Long before quickening takes place, motion, the pulsation of the heart, and other signs of vitality have been distinctly perceived. Haller, indeed, asserted, "that all the viscera and bones of the future fœtus, nearly fluid indeed, and therefore invisible, were preformed before conception in the maternal germ." However objectionable such an opinion may be, yet the fact is certain, that *the fœtus enjoys life long before the sensation of quickening is felt by the mother*. Indeed, no other doctrine appears to be consonant with reason or physiology, but that which admits the embryo to possess vitality from the very moment of conception.

If physiology and reason justify the position just laid down, we

* There is a difference of opinion as to the real nature of quickening. It has been lately suggested by a writer, that it is altogether independent of any motion of the child, and that it is to be attributed to the sudden rising of the uterus out of the pelvic cavity into the abdomen. (London Med. and Phys. Journal, vol. 27, p. 441.) If this opinion be true, it would afford another incontrovertible argument in favour of the position which I have advocated.

† Saumarez' Physiology, vol. 2, p. 21; Review of Sir E. Home's paper on the Functions of the Brain, Edin. Review, vol. 24, p. 439.

must consider those laws which exempt from punishment the crime of producing abortion at an early period of gestation, as immoral and unjust. They tempt to the perpetration of the same crime at one time, which at another they punish with death. In the language of the admirable PERCIVAL, "to extinguish the first spark of life, is a crime of the same nature, both against our Maker and society, as to destroy an infant, a child, or a man: these regular and successive stages of existence being the ordinances of God, subject alone to his divine will, and appointed by sovereign wisdom and goodness, as the exclusive means of preserving the race, and multiplying the enjoyments of mankind."*

Having thus endeavoured to show that there is no period of gestation at which the fœtus is not to be considered alive, I come now to take up the consideration of the questions originally proposed.

Quest. 1. *Has the fœtus in utero been actually destroyed?*

The proofs to establish this, are to be drawn from two sources, viz: From an examination of the reputed mother,—and an examination of the fœtus.

Of the signs of abortion to be deduced from an examination of the female.

In the early months of pregnancy, it is extremely difficult to ascertain whether an abortion has taken place or not. The fœtus has scarcely had time to make those firm attachments which afterwards unite it to the womb; nor has it attained to a size sufficient to produce those general changes in the constitution of the mother, nor those local alterations from the distention of the uterus and abdomen, which are afterwards occasioned. Its separation, therefore, is unattended by violence, and leaves but faint, if any traces of its previous existence. The hæmorrhage attending it is also of small consequence, inasmuch as the uterine vessels have not yet sustained any great enlargement, and therefore very speedily contract. The period to which these remarks more particularly apply, is the two first months of pregnancy, during which it is conceded that no satisfactory opinion can ever be formed from an examination of the female.† After this period,

* Percival's Works, vol. 2, p. 430, 31.

† Manuel de Médecine Légale. Par. J. Briand. p. 67.—A Manual of Medical Jurisprudence, by M. Ryan, M. D. Edited by R. E. Griffith, M. D. p. 129.—Marc, Dictionnaire de Médecine, vol. 3, p. 193.—Dr. Montgomery, in his valuable paper on

and just in proportion to the approach to the full term, will the signs be more decisive and satisfactory. For obvious reasons, I shall describe them such as they will be found when existing in their most marked and defined character, and these are the same as those which occur after ordinary delivery.

The signs are deduced from three different sources, viz :—
From the *condition of the organs of generation themselves* :—from the *condition of the abdominal parietes* ;—and from the *condition of the breasts*.

1. *Condition of the organs of generation*. In consequence of the expulsion of the fœtus from the uterus, there are several striking changes which take place in these organs, from which important conclusions may be drawn. The more characteristic of these are the following :

Labia and perineum. The labia will be found, on examination, to be tumified and relaxed, and of a dark red colour ; while in some cases the anterior edge of the perineum, called the fourchette, will be lacerated. These changes, of course, are owing to the unnatural irritation and distention which these parts have necessarily undergone during the passage of the fœtus.

Vagina. On introducing the finger into this organ, it will be found preternaturally enlarged and relaxed, from the same cause as the preceding. From the distention which it has suffered, its natural rugæ will also be obliterated, and its inner surface rendered more or less smooth.

Os and cervix uteri. On examining with the finger immediately after delivery, the neck of the uterus will be indistinct, and the mouth of that organ so dilated as to be scarcely distinguishable from the cavity of the vagina. When it is discovered, its edges will be found to be soft and flabby, and so open as to admit of the introduction of two or more of the fingers. After delivery, the os uteri gradually contracts, but never or “rarely closes to the same degree as in the virgin state.”*

Uterus. This is to be examined through the abdominal parietes.

the signs of pregnancy and delivery, relates the case of a lady to whom he was called, who miscarried at the end of the second month. In twenty-four hours afterwards, he found the os and cervix uteri almost completely restored to their natural state ; the vagina and external parts hardly if at all dilated, and very little relaxed ; and the breasts exhibited very imperfectly the appearances which accompany pregnancy, the ordinary sympathetic symptoms of which had been almost entirely absent. (See *Cyclopædia of Practical Medicine*, vol. 3, p. 504.)

* Burns' *Midwifery*, p. 564. Seventh American edition.

On applying the hand to the abdomen immediately after delivery, this organ will be readily detected just above the pubes, in the shape of a hard round ball about the size of the child's head. It is during the first week after delivery, that the uterus is to be felt most distinctly in this situation; after this, the uterine tumour gradually lessens, and becomes more and more indistinct. It is at least a month, according to Burns, before the uterus returns to its natural dimensions.*

The lochia. This is a discharge which takes place from the uterine organs immediately after the completion of delivery, and continues for a certain number of days. At first it is pure blood, and continues so during the first two or three days after delivery. It then changes to a paler colour, and finally assumes a whitish appearance. In some cases it eventually becomes of a dark dirty green aspect, when it is known by the name of the "*green waters*." Now as this discharge comes from the relaxed and ruptured vessels of the uterus, and as its cessation depends upon the contraction of these vessels, it is evident that not merely its quantity, but its duration, must vary very greatly, according to the particular condition of the patient and the greater or less rapidity with which the uterine vessels contract. Accordingly, it will be found that in some cases this discharge ceases in ten or twelve days, while in others it continues, to the twenty-fifth or thirtieth day, and sometimes even longer.† Attending this discharge, there is an odour so peculiar that it can always be recognized by those at all conversant with it, and which is not present in any other discharge from the uterine organs.

2. *Condition of the abdominal parietes.* The circumstances indicative of delivery, in connexion with the abdominal parietes, are their flaccidity, and the presence of the lineæ albicantes.

Flaccidity of the abdomen. On examining the surface of the abdomen after delivery, besides detecting the uterine tumour, which has been already mentioned, the abdomen will be found soft, relaxed, and frequently lying in folds. So great is this relaxation of the parietes sometimes, that they may be almost folded round the hand. This is more especially observed in those who have borne a number of children.

* Burns' Midwifery, p. 564.

† See an Elementary Treatise on Midwifery, by A. L. M. Velpeau, M. D. Translated by C. D. Mcigs, M. D. p. 579. A Compendious System of Midwifery, &c. by William P. Dewees, M. D. p. 210.

Lineæ albicantes. These are shining whitish lines, to be seen on the surface of the abdomen, extending chiefly from the groins to the navel. They arise from the great distention and cracking of the skin during pregnancy, and remain frequently permanent for life: they are not, therefore, to be looked upon as the evidences of recent delivery.

3. *Condition of the breasts.* The phenomena connected with the breasts as evidences of delivery, are their enlargement, the secretion, and the presence of the areola.

Enlargement of the breasts. About the third month of pregnancy, the breasts begin to enlarge, and continue to do so until they frequently become double their original size; at the same time they become tender and painful, and have a firm lumpy feeling. After delivery, particularly if examined about the third or fourth day, they will be found full and tense.

Secretion of milk. This is another sign of pregnancy and delivery. It is important, however, to recollect that too much stress should not be laid upon this, apart from other indications, inasmuch as it frequently takes place independently of both. Dr. Blundell relates the case of a female who had not had a child for three years; she had not suckled for some time previously, and was not pregnant, and yet the secretion of milk was so active that it flowed freely on the least pressure of the breast.* Another case is related by him, of a negress who secreted milk for twenty years after her pregnancy.†

Areola around the nipple. In the virgin state, the nipple is surrounded by a circular discoloration of the skin, which is generally of a rosy tint, sometimes merely a little lighter than the natural skin. During the pregnant state, this undergoes striking changes. It becomes broader and darker, being converted into "a coppery red, or a dark mahogany brown."‡ The diameter of this circle averages from one inch to one inch and a half. Both the extent and colour of the areola differ considerably in different persons.§ After a first pregnancy, it is to be recollected

* Blundell's Midwifery, p. 112. American edition. † Ibid. p. 112. ‡ Ibid. p. 113.

§ Dr. Montgomery records a case in which the diameter exceeded three inches. In negro women, the areola is almost jet black. (Cyc. Prac. Med. vol. 3, p. 474.)

Dr. Montgomery, who has paid especial attention to this subject, describes other features besides mere colour, as characterizing very strikingly the areola. His words are the following: "In the centre of this circle, (the areola,) the nipple is observed partaking of the altered colour of the part, and appearing turgid and prominent; and the part of the areola more immediately around the base of the nipple, has its surface

that the areola remains more or less permanent; it is therefore not to be looked upon as a criterion of a recent delivery. Of all the individual signs, this is one of the most certain, and may be depended upon with a good deal of confidence, provided the discoloration be very decided, and the female has not borne children previously.

Such are the signs deduced from the female, by which it is to be determined whether a delivery has taken place. From the account given of them, it is evident that many are necessarily evanescent in their character; and therefore, in order to obtain the fullest amount of testimony from them, the examination should be instituted as speedily as possible after delivery has taken place. With regard to the latest period after delivery, at which a satisfactory decision may be made, some difference of opinion has existed. The period fixed upon by medical jurists generally, is from the eighth to the tenth day.* After this, many of them become too obscure to be relied on with any degree of certainty.

Relative value of the preceding signs of delivery. In relation to the foregoing signs, it is essential to recollect that all of them have been objected to as uncertain, inasmuch as almost every one of them may be produced by other causes than delivery. Thus, for example, the enlargement and relaxation of the external parts may arise from simple menstruation; the dilatation of the vagina and os uteri, and the enlargement of the uterus, may arise from hydatids or moles; the relaxation and marked state of the abdomen may arise from dropsy; even the areolæ around the nipples, as well as the secretion of milk, may arise from other causes than pregnancy and delivery.

Now it must be admitted that, all these objections are, to a certain extent, well founded; and they go to show that no one sign, taken by itself, ought to be considered sufficient to establish the

rendered unequal by the prominence of the glandular follicles, which, varying in number from twelve to twenty, project from the sixteenth to the eighth of an inch; and lastly, the integument covering the part is observed to be softer and more moist than that which surrounds it, and the breasts themselves are at the same time observed to be full and firm, at least more so than was natural to the person previously. Such we believe to be the essential characters of the true areola, the result of pregnancy; and that, when found possessing these distinctive marks, it ought to be looked on as the result of that condition alone, no other cause being capable of producing it." (Cyclopædia of Practical Medicine, vol. 3, p. 474.)

* Paris and Fonblanque, vol. 1, p. 252. Foderé, tom. 2, p. 87. Montgomery in Cyclopædia of Practical Medicine, vol. 3, p. 503. Griffith's Ryan, p. 133.

fact. In all cases, a *number of the signs* should concur before any satisfactory conclusion can be formed. If this general caution be observed, the force of all the preceding objections will be materially weakened. Thus, for instance, *menstruation* may relax the vagina and external parts, at the same time that it causes a discharge from these organs. In this case, however, all the other signs will be absent. The peculiar odour of the lochia will be wanting; there will be no dilatation of the os uteri—no enlargement of the uterus—no wrinkling of the abdominal parietes—no secretion of milk, and no areola around the nipples. Again, *dropsy* may cause a great relaxation and wrinkling of the abdomen. I say *may*, because, generally speaking, unless the dropsical fluid be suddenly removed by tapping, this will not happen, as in ordinary cases the fluid is removed so gradually that the abdomen has time to contract, and accommodate itself to the change. Admitting, however, that these signs of pregnancy may be counterfeited by dropsy, so many others will be absent as to leave no doubt in the case. The vagina and external parts will not be affected; the os uteri will not be dilated; the uterus will not be enlarged; the breasts will have undergone no change, and there will be no lochial discharge.

With regard to the *secretion of milk* from other causes than pregnancy, this is a fact which cannot be denied. But in cases of this sort, so many of the other signs of delivery will be absent as to obviate any difficulty that may arise.

As to the objections founded on the existence of hydatids, it must be confessed that much more difficulty attends a correct decision. These, however, I shall consider fully under the next head.

Of the signs of abortion, in cases in which the delivery is followed by the death of the female.

Cases of this kind sometimes occur, and it then becomes the duty of the professional man to prosecute his researches still further, by an anatomical inspection of the uterus and its appendages.

1. *The uterus.* In this organ, various appearances will be detected, indicating the fact of its having contained a fœtus.

Its size will be different from that of the unimpregnated uterus. In the unimpregnated state, the dimensions of the uterus may be

put in round numbers at three inches for its length, two for its breadth at the fundus, one inch at the cervix, and one inch for its thickness. In the gravid state, it is evident that its size must vary considerably according to the size of the fœtus, and according to the quantity of liquor amnii.* A general average however, of its gradual changes in this respect may be put as follows:—During the first month the uterus, undergoes little or no change in its size.† During the second month it becomes considerably enlarged. About the end of the third month it will measure about five inches in length, of which the cervix will measure one inch. In the fourth month, it will measure five inches from the fundus to the beginning of the neck. In the fifth month, it will measure six inches from the fundus to the cervix. In the sixth and seventh months it will measure about eight inches, and in the ninth it will be from ten to twelve inches from the top to the bottom.‡

Now in a case where a woman dies from hæmorrhage during labour, at the full time or immediately after, the uterus will be found like a large flattened pouch measuring from ten to twelve inches. In this case little or no contraction having taken place, the dimensions of the uterus are little changed from what they were anterior to labour. If, however, uterine contractions should have taken place, the dimensions of the uterus would be considerably less. If some days had elapsed, the size would of course be still more diminished. If the examination be made about two days after delivery, the uterus will be about seven inches long. At the end of a week, it will be about five or six inches,§ and at the end of a fortnight about five inches long.

Its *shape* will be different from what it is in the unimpregnated state. In the unimpregnated state, the uterus is a flat body, pyriform or somewhat triangular in its shape. During the first two months of pregnancy its shape remains unchanged; after this, the body of it becomes globular, without any material change having taken place in the neck, until about the fifth month. After this the neck grows shorter and broader, until in the two last months it is almost entirely obliterated, and forms a part of the

* An Anatomical description of the Human Gravid Uterus and its contents. By the late William Hunter, M. D. p. 2.

† Maygrier's Midwifery, p. 81.

‡ Burns' Midwifery, pp. 185, 563.

§ According to Burns, "a week after delivery, the womb is as large as two fists." (Midwifery, p. 564.)

general cavity of the uterus. The shape of the uterus is now completely ovoid. Now if, death takes place during or immediately after labour, the shape of the uterus will be ovoid, or if contractions have taken place, it will be globular. If, on the other hand, several days have elapsed, it will have regained somewhat of its pyriform shape.

Thickness of the uterus. On this point contradictory accounts are given. At the full time however, and when the uterus is still distended with its contents, its thickness varies very little from that before impregnation; in some cases even it appears to be thinner;* according to Hunter, its more common thickness is from one to two-thirds of an inch.† Generally speaking, too, the uterus is thickest at its fundus, and especially where the placenta has been attached. When, however, the examination is not made until some hours or days after delivery, and the uterus has had time to contract, it will then be found thicker than natural. In that state it will often be found two inches thick.‡ It is well enough to recollect that gravid uteri, when injected, are much thicker than in their natural state.§

Uterine blood-vessels. There is nothing in connexion with the pregnant uterus more striking, than the great enlargement which the blood-vessels have undergone. Both the arteries and veins, but more especially the latter, are enormously enlarged from their natural dimensions. This is most strikingly observed in that portion of the uterus to which the placenta is attached.|| The arteries will be found from the size of a goose quill to that of a crow quill, and downwards,¶ and the veins will be found much larger. In some cases, the orifices of the veins opening into the uterus from the surface where the placenta has been attached, are large enough to admit the extremity of the little finger.**

Inner surface of the uterus, and the placental mark. If the examination be made shortly after delivery, the cavity of the uterus will be found to contain coagula of blood, or a bloody fluid. The part of the uterus to which the placenta has been attached,

* Monro in the *Edinburgh Essays and Observations, Physical and Literary*, vol. 1, p. 418. See, also, Hunter on the *Gravid Uterus*, p. 15.

† *An Anatomical Description of the Human Gravid Uterus and its Contents.* By William Hunter, M. D. p. 15.

‡ *Ibid.* p. 15.

§ *Edinburgh Essays and Observations*, vol. 1, p. 418.

|| Hunter on the *Gravid Uterus*, p. 17.

¶ *Edinburgh Essays and Observations*, vol. 1, p. 427, 435. ** *Ibid.* vol. 1, p. 412.

will be very visible, and corresponding in size to the placenta. This part will be of a dark colour, and have a gangrenous appearance; the vessels leading to it will also be much more enlarged than those of any other portion of the uterus.

Ligaments of the uterus. These undergo great changes. The *broad ligaments* will be found effaced, in consequence of the fundus of the uterus enlarging and rising, so as to stretch them into a uniform covering of the uterus. This, of course, is only at the full term of pregnancy; at earlier periods, the condition of these ligaments will vary according to the enlargement which the uterus may have undergone. The *round ligaments* will be found much elongated, and thicker than in the ordinary state. In this enlarged state, they are about the thickness of the little finger; while in their natural state, they are not thicker than a crow quill. They are also exceedingly vascular—so much so, that when injected, “they seem to be little more than a bundle of arteries and veins.”*

Fallopian tubes. These will be found less convoluted—larger, and much more vascular than in the unimpregnated state. So great is this vascularity as frequently to give them a purplish appearance, looking very much as if they were in a state of inflammation. Generally the tube leading to the ovary from whence the ovum has escaped, will be found the most enlarged. Mr. Burns says, “the fallopian tube preserves its greater vascularity for a very considerable time, I cannot say how long, after delivery.”†

Ovaria. These will be found but little different from the state anterior to impregnation, with the exception of the one from which the ovum has escaped, and which contains the *corpus luteum*. This ovary can easily be identified by a peculiar fullness or prominence in one part of it, sensible both to the sight and touch, in the middle of which there is a small indentation like a cicatrix. On laying open the ovary at this part, there will be found a body of a very distinct nature from the rest of the ovary; this is the *corpus luteum*. It is sometimes round, but more generally oblong or oval. “Its centre is white, with some degree of transparency; the rest of its substance has a yellowish cast, is very vascular, tender and friable like glandular flesh.”‡

* Hunter on the Gravid Uterus, p. 13.

† Midwifery, p. 564.

‡ Hunter on the Gravid Uterus, p. 14.

Such is the appearance of the corpus luteum, if examined shortly after delivery at the full time. If examined, however, at other periods, these appearances will be considerably different. The earliest period after impregnation, at which the corpus luteum has been observed in the human subject, is in the case recorded by Sir Everard Home. Here the female died about eight days after impregnation; and on dissection, the right ovary was found to have a small torn orifice upon the most prominent part of its external surface. On slitting open this orifice, it led to a cavity filled with coagulated blood, and surrounded by a yellowish substance.* The blood is gradually absorbed, and the cavity becomes lined with a white membrane. During the earlier months, a fluid will be found in the cavity.† The cavity after this becomes gradually contracted, and in the third or fourth month, it is about large enough still to contain a grain of wheat; after this it is completely obliterated, and in its place there is left a central white radiated or stellated line.‡ This stellated line is looked upon by Dr. Montgomery as a distinguishing characteristic of a genuine corpus luteum.§ It is not permanent, however, but disappears at about five months after delivery.

Such is the corpus luteum. It is largest and most vascular in the earlier periods of pregnancy; less so at delivery; and disappears altogether, according to the observations of Dr. Montgomery, at about five months after delivery.

Relative value of the preceding signs, drawn from an examination after death. Striking as the foregoing signs unquestionably are, objections of a very serious character may be made against them. As these objections have actually been brought forward in criminal trials, a notice of them is unavoidable. Of these the only ones which require consideration, are, that all the appearances just described as found on dissection after delivery, may have been occasioned by the delivery of *hydatids* or *moles*; and that the corpora lutea may exist independent of pregnancy and delivery. Each of these objections I shall briefly notice.

* Philosophical Transactions for 1817, part 1.

† Hunter on the Gravid Uterus, p. 74.

‡ Montgomery on the Signs of Pregnancy, p. 226.

§ "Of this latter appearance, (the radiated line,) it ought to be observed here, that it is visible as long as any distinct trace of the corpus luteum remains, and forms an essential character, distinguishing this body from every other that might be confounded with it." (Ibid. p. 226.)

1. *Hydatids*. Although not of very frequent occurrence, these are sometimes found existing in the uterus. They are small vesicles, hung together in clusters, and filled with a watery fluid. Their real nature is not exactly known, although they are supposed to be animals of a very simple structure. They sometimes exist in large masses in the uterus. The origin of these curious productions is by no means established. By some it is supposed that they may exist in the uterus itself, and originate without any connexion with impregnation. This, however, is by no means certain; and the probability is that they never occur *without sexual intercourse*.* As commonly found, they appear to arise from the destruction of the ovum at an early period, or portions of the placenta remaining in the uterus after abortion or delivery, and degenerating into this kind of growth. Now it is very evident that some of the appearances and phenomena of pregnancy may be, and actually are, simulated by the presence of these substances in the uterus. Every phenomenon that depends upon the mere distention of the uterus, and the subsequent discharge of its contents, may thus be counterfeited. So far then as the mere external appearances go, it is frequently impossible to decide whether they originate from a real foetus, or from hydatids. Even where there is no wish to conceal the real condition of the person, it is sometimes difficult to make up a positive opinion. Females have in this way been themselves deceived. Presuming themselves pregnant, the discharge of the hydatids has led them to suppose it a real miscarriage.†

In cases like those of criminal abortion, where every effort is made at concealment, it is of course out of the question to say which was the cause;‡ and the only way to settle the question, is by an examination of what may have been actually discharged from the uterus. In cases where the abortion ends in the death of the female, although we have the benefit of the additional information furnished by dissection, still the inquiry is not unat-

* Madame Boivin broadly asserts that hydatids are always the product of a degenerated conception, and that no virgin female can ever have them. (*Nouvelles Recherches sur l'origine, la nature, et le traitement de la mole vésiculaire ou grossesse hydatique*. Par M^e. Boivin. Paris, 1827.)

† An account of some of the most important Diseases peculiar to Women. By Robert Gooch, M. D. p. 216. American edition.

‡ Gooch, after relating some cases of hydatids, says, "In the progress of these cases, it is impossible to come nearer the truth than this—that the abdomen owes its enlargement to a distended uterus; but what this organ contains, is uncertain." (*Ib.* p. 218.)

tended with difficulties; and it is by no means easy to decide whether the phenomena which are observed are the result of the expulsion of a real foetus, or of hydatids. The following considerations must render this obvious. It has already been stated that, in all probability, hydatids are always the result of impregnation, the ovum or some portion of the contents of the gravid uterus, being converted into this kind of growth. If this be so, a corpus luteum will be found, if the examination be made under favourable circumstances. Besides this, it has already been stated that every phenomenon connected with the enlargement of the uterus, and the dilatation of the os uteri, may also be produced by hydatids. Even the placental mark may be present. Cases therefore may occur, in which it would be impossible to distinguish between the two. I say *may*, because generally speaking, in cases of hydatids, no placenta is found, and therefore they do not leave behind them any thing like the mark which is left by that body on the inner surface of the uterus. In cases of hydatids, the vesicles hang in clusters, attached by an intermediate membrane to the inner surface of the uterus.* This then would furnish one mark of distinction. Another might be found in the different condition of the uterine blood-vessels. In cases of real pregnancy, the blood-vessels, especially those confined to the placental space, undergo a much greater enlargement than when hydatids alone are in the uterus. Independently, however, of all these considerations, there is not practically, after all, so much difficulty in these cases as might be anticipated. If hydatids are always the result of a degenerated conception, then the fact of impregnation is conceded; and this, after all, is the great point to be established in these cases. If, on the other hand, hydatids have no connexion with conception, then the question might be decided by the presence or absence of the placental mark, but more especially by the presence or absence of the corpus luteum.

* By Dr. Denman, they are described in the following manner: "Hydatids or small vesicles, hang together in clusters, from *one common stem*, and containing a watery fluid, are sometimes formed in the cavity of the uterus." (Introduction to the Practice of Midwifery, p. 146. American edition.)

According to Dr. Baillie, "they consist of vesicles of a round or oval shape, with *a narrow stalk to each, by which they adhere to the outside of one another*. Some of these hydatids are as large as a walnut, and another as small as a pin's head. A large hydatid has generally a number of small hydatids adhering to it by *a narrow process*." (Morbidity Anatomy, p. 136. American edition.)

Besides all this, in cases where the signs of delivery are alleged to be owing to hydatids, it is but reasonable to expect that these should be adduced in evidence, and in that case of course, all difficulty will at once be obviated.

2. *Moles.* These are peculiar substances contained within the cavity of the womb. They consist of a membrane enclosing generally a quantity of coagulated blood. Frequently, however, they appear of a fleshy structure without any blood. In their size, consistence, and structure they differ very much in individual cases. They occur, too, under a variety of circumstances. They have been met with in females who have never been married, or borne any children. In some cases they have followed a natural delivery, or a miscarriage; while in others they have accompanied certain diseased conditions of the uterus. By some it is supposed that these formations never take place in the *virgin state*. Mr. Burns says, he has never met with a case contradictory of such a supposition.* That they may, however, occur occasionally without any sexual intercourse, appears to be pretty well established. Now in these cases, many of the symptoms of actual pregnancy are present. The abdomen becomes enlarged; the stomach is affected with nausea; and even the breasts become swollen.† Here then, also, as in the case of hydatids, it is impossible from mere external appearances to say whether these symptoms arise from genuine pregnancy or not.

In these cases where death takes place, and dissection has been had, the same reasoning is applicable here as in cases of hydatids. If the mole be the product of a real conception, the great object of the investigation is at once conceded. If on the other hand, it be not the product of a real conception, then the examination of the placental mark and ovaria will indicate the fact.

3. With regard to the objection raised on the ground that the *corpora lutea* are sometimes found in virgins, and therefore are not to be looked upon as the infallible evidences of impregnation, it has been rendered more than doubtful whether a genuine corpus luteum is ever present except in cases of real pregnancy.‡

* The Principles of Midwifery, p. 127.

† Ibid. p. 127.

‡ On this subject see the luminous investigations of Dr. Montgomery, in the Cyclopædia of Practical Medicine. According to him the appearances which are considered as corpora lutea occurring in virgins, differ from those of impregnation in all the following particulars: "1. There is no prominence or enlargement of the ovary over them: 2. The external cicatrix is wanting: 3. There are often several

Of the signs of abortion, deduced from an examination of what may have been expelled from the uterus.

Here there are three objects to be had in view, viz: To ascertain whether it be really a fœtus that has been expelled from the uterus; and if it be a fœtus, to ascertain its age; and lastly, to ascertain the cause of its expulsion.

1. *To ascertain whether it be really a fœtus which has been expelled.* From the difference in structure of the fœtus from hydatids and moles, it is scarcely possible that any mistake can be made in distinguishing them from one another, except in the very early months of pregnancy, say in the first two months; and at this early period, probably no medico-legal investigation could ever be instituted with any satisfactory result.

2. *To ascertain the age of the fœtus.* This is important, inasmuch as it enables us to compare it with the appearances found on an examination of the female, to see how they correspond, and in this way to assist in detecting any imposition which may be attempted. In a preceding chapter, the progressive developments of the fœtus have been so fully detailed, as to render here unnecessary, any thing more than a simple reference to it.*

3. *To ascertain, if possible, what has been the cause of the miscarriage.* If the abortion has been occasioned by the use of drugs, &c. taken by the mother, nothing can be learned as to the cause of it, whether it be voluntary or involuntary, from any examination of the fœtus. In all cases its appearance will be very much the same, whatever may have occasioned its expulsion from the womb. As, however, it may have been produced by mechanical violence done to the fœtus itself, by the introduction of instruments, &c. it becomes necessary to examine it very carefully, and more especially its head, to discover the nature and extent of the wounds (if any) which may have been inflicted.

of them in both ovaries, especially in patients who have died of tubercular diseases: 4. They are not vascular, and cannot be injected: 5. Their texture is sometimes so infirm that they seem to consist merely of the remains of the coagulum, and at others appear fibro-cellular and resembling that of the internal structure of the ovary, but in no instance did we ever see them presenting the soft, rich and regularly glandular appearance which Hunter meant to express when he described them as 'tender and friable like glandular flesh:' (Description of the Gravid Uterus, p. 14.) 6. They have neither the central cavity nor the radiated cicatrix which results from its closure." (Cyclopædia of Practical Medicine, vol. 3, p. 502.)

* See chap. vii. part 2.

Quest. II. *Of the means, by which the death of the fœtus may have been produced.*

Having, in the foregoing manner, examined the first question to be solved, viz. whether a fœtus in the utero has actually been destroyed, the second question relates to the causes by which it may have been produced.

The practice of causing abortion, is resorted to by unmarried females, who, through imprudence have become pregnant, to avoid the disgrace which would attach to them from having a living child; and sometimes it is even employed by married women, to obviate a repetition of peculiarly severe labour-pains which they may have previously suffered. But abortion is not always associated with crime and disgrace; it may arise from causes perfectly natural, and altogether beyond the control of the female. The physician should therefore be extremely cautious in his proceedings, even in cases of illegitimate pregnancy, and where the voice of popular prejudice seems to call upon the medical witness merely to confirm its previous, and often false decisions. The destruction of the fœtus may then result from two sets of causes. 1. The use and application of various criminal agents. 2. The ordinary and accidental causes which are known to produce it, without any criminal interference. Each of these require examination, as in every trial of this kind, they may be made the subject of special inquiry by the court and jury.

1. *Of the criminal means, resorted to for the purpose of destroying the fœtus.*

These may be divided into general and local. To the first belong venesection, emetics, cathartics, diuretics, emmenagogues, &c. &c. The second embraces all kinds of violence directly applied.

Venesection. From the earliest periods it has been supposed, that bleeding during pregnancy exercised some deleterious influence upon the fœtus, and that the repetition of it would infallibly destroy it. Hippocrates entertained this belief,* and it has accordingly long been resorted to as one of the popular modes of

* Mulier uterum ferens abortit secta vena, eoque magis, si sit fœtus grandior. (Hippocrates, sec. 5, aphor. 31)

producing abortion. Bleeding from the foot has been supposed to be particularly effective in this way. All this is probably founded on the supposition that whenever blood is taken from the mother, the fœtus also loses a proportional quantity, and that by a frequent repetition of it, the latter may eventually be bled to death. Experience, however, the most ample and satisfactory, has proved conclusively, that except in particular states of the constitution, venesection, however repeated and copious, can have no direct effect upon the fœtus; and further, that in many cases it is the most effectual agent in averting abortion. Mauriceau relates the history of two pregnant women, who were delivered at the full period, of living children, although one of them had been bled forty-eight times, and the other ninety times, for an inflammation of the chest.* By the same author, a case is recorded in which a person was bled ten times from the foot during pregnancy, without any bad effect on the fœtus.† Dr. Rush, in speaking of the effects of bleeding in the yellow fever of 1793, asserts that not one pregnant woman to whom he prescribed it, died, or suffered abortion.‡ In his defence of blood-letting, the same writer gives us the account of one woman whom he bled eleven times in seven days, during her pregnancy; of another, who was bled thirteen times, and of a third who was bled sixteen times while in the same condition. All these women, he adds, recovered, and the children carried during their illness, were born alive and in good health.§ The foregoing facts, selected from a multitude of a similar character, are abundantly sufficient to show the extent to which venesection may be carried during pregnancy, without being attended with any injurious consequences to the fœtus; and the effect is the same, from whatever part of the body the blood is drawn, whether from the arm or from the foot.

In the cases just alluded to, it is true, blood was drawn during a state of disease, when the loss of a much larger quantity can be borne than in ordinary health. Nevertheless, even in a state of health, the loss of a very large quantity of blood is not necessarily attended by any injurious consequences to the fœtus. On the other hand, it should be recollected, that when the constitution of the mother is naturally feeble and irritable, or has become

* Capuron, p. 307.

† An Elementary Treatise on Midwifery, by A. L. M. Velpcau, M. D. Translated by C. D. Meigs, M. D. p. 236.

‡ Medical Observations and Inquiries, vol. 3, p. 309. § Ibid. vol. 4, p. 302.

much debilitated by disease, the injudicious loss of blood during pregnancy, may prove fatal to the fœtus. In all cases therefore, the question whether the bleeding has had any agency in producing the destruction of the fœtus, must be determined by the particular circumstances of the individual case. At the same time, the mere fact of repeated bleedings having been resorted to without any obvious necessity for it, must be held as a sufficient evidence of the intention of the person.

Leeches. By some it is supposed that the application of *leeches* to the anus, insides of the thighs, or the vulva, has the effect of producing abortion. In this country, this practice is so uncommon that we are hardly able to form any very correct opinion on the subject. A recent French writer, however, states that he has frequently applied leeches to these parts during pregnancy, in cases of intestinal affections, and in no instance did he find any bad consequences happen. At the same time he recommends great caution in the use of this remedy, especially in females who are liable to abort.*

Emetics. From the well known fact, that many women are troubled with distressing nausea and vomiting during the whole of their pregnancy, and yet are safely delivered of living children at the regular period, it has been supposed that the fœtus could not be much injured by the use of emetics. The fact, however, seems to be, that although the vomiting attendant upon pregnancy very seldom produces an abortion, yet that which is produced by emetics is not unfrequently followed by consequences the most serious both to mother and fœtus. In this opinion, I am supported by the authority of Mr. Burns, who says that "it is worthy of remark that abortion is very seldom occasioned by this cause, (the vomiting of pregnancy) though emetics are apt to produce it.† The reasons of the difference in the two cases, may be the following. In the first place, the vomiting of pregnancy is less violent than that which is excited by artificial means; and in the second place, it occurs, as a general rule, only in the early months of pregnancy, when of course less danger attends the operation. Just in proportion to the size and development of the uterus, is the danger to be apprehended from the

* Etudes Cliniques sur les Emissions Sanguines Artificielles. Par A. P. Isidore Polinière. Tom. 1, p. 34.

† The Principles of Midwifery, p. 230. Seventh American edition.

spasmodic contraction of the diaphragm and abdominal muscles during vomiting. In the latter months of pregnancy, therefore, emetics prove much more dangerous than they do at an earlier period. Notwithstanding this, even emetics do not always succeed. Velpeau relates a case falling under his own observation, in which fifteen grains of *tartar emetic* were taken to produce abortion. Although violent efforts at vomiting were occasioned, yet the progress of the pregnancy was not interrupted.*

Cathartics. As a general rule, pregnant women are not apt to be injured by moderate purging. When attacked with disease, too, they may be purged very freely without any risk. During the yellow fever of 1793, Dr. Rush informs us, that he gave large and repeated purges of calomel and jalap to many women in every stage of pregnancy, and in no case did any injury ensue to the child. Nay, he adds, that out of a great number of pregnant women, whom he attended in this fever, he "did not lose one to whom he gave this medicine, nor did any of them suffer an abortion. One of them had twice miscarried in the course of the two or three last years of her life. She bore a healthy child three months after her recovery from the yellow fever."† If, however, the purging should happen to be carried too far, or be continued too long;‡ if the article used be very drastic in its nature; if it act particularly on the rectum,§ (between which and the mouth of the uterus there appears to be a peculiar sympathy;) or if the female be of a nervous, irritable habit, then purging may be, and frequently is followed by the death and expulsion of the fœtus. Purgatives, therefore, may or may not produce abortion, according to circumstances.||

Diuretics. This class of agents has long been supposed capable of producing abortion, and has accordingly been frequently used for this purpose. That they may have been occasionally attended with success, is very possible; but I have no doubt that,

* Meigs' Velpeau, p. 236. † Medical Observations and Inquiries, vol. 3, p. 249.

‡ Several cases of abortion have been known to occur in this city, in females who were in the constant habit of taking Brandreth's pills, a purgative nostrum at present very popular in this country. See an Essay on the influence of trades, &c. By B. W. M'Cready, M. D. Trans. of the Med. Society of the State of New York, vol. 3, p. 149.

§ All those purgatives which produce tenesmus, are most apt to cause abortion. Hence it is, too, that dysentery frequently produces this effect.

|| Dr. James Johnson states, that he has known a very moderate dose of calomel and rhubarb to cause a premature delivery. (Medico-Chirurgical Review, vol. 17. p. 98.)

generally speaking, they have failed. They certainly are destitute of any specific power of exciting uterine action. Mr. Burns seems to think that they are capable of bringing on abortion, and accordingly advises that they should be avoided during pregnancy.* Still, from his own language, I should not infer that he had ever witnessed this effect, although he says that he has seen diuretics given very freely to pregnant women labouring under ascites.† On the other hand, there are many positive facts on record to prove that diuretics may be taken with impunity by pregnant women. Zacchias relates the case of a female, who, after an interval of five years, considered herself pregnant, and shortly afterwards was attacked with sciatica. Several physicians and midwives were called to examine her, and decided unanimously, that she was not pregnant, particularly as she lost a little blood every month, though not so much as in menstruation. They therefore prescribed for the disease which afflicted her, bled her repeatedly in the foot, administered purgatives frequently, together with diuretics and sudorifics. All this did not prevent her from bringing forth a healthy child at the end of the expected time.‡

In the Edinburgh Medical Essays and Observations, is recorded a case of a female who had ascites during pregnancy. Three months after conception she was tapped, and eight pints of water drawn off. After this she was tapped twice again, and at each time four pints were drawn off. During this time too, she took freely of active diuretics and cathartics, among which were calomel and various hydragogue articles. Notwithstanding all this she brought forth a living healthy child at the full time.§

Concerning the *oil of juniper*, Foderé relates the following fact, which shows that this powerful article has failed in effecting an abortion. A pregnant female took every morning for twenty days, one hundred drops of the distilled oil of juniper, without injury, and was delivered of a living child at the expiration of the ordinary term.||

Even *cantharides* has been taken in very large doses, with a view of procuring an abortion, without accomplishing the desired effect. "Some years ago," says Mr. James Lucas, one of the surgeons of the General Infirmary at Leeds, "I was called to a

* Principles of Midwifery, p. 283.

§ Vol. 6, p. 138.

† Ibid. p. 288.

|| Foderé, vol. 4, p. 430.

‡ Foderé, vol. 4, p. 430.

patient who had taken about a drachm of powdered cantharides in order to induce abortion, and which brought on frequent vomiting, violent spurious pains, a tenesmus and immoderate diuresis, succeeded by an acute fever, which reduced her to extreme weakness, yet no signs of miscarriage appeared, and about five months afterwards she was delivered of a healthy child."* Cases, however, have occurred in which cantharides have caused abortion. Dr. James Johnson mentions a case of this kind as occurring within his own knowledge.†

Nitre. Dr. Paris relates the case of a woman in Edinburgh, who having swallowed by mistake a handful of this salt, suffered abortion in less than half an hour.‡

Emmenagogues. Under this general head there are several articles which require notice. Among the more important are savine, mercury, polygala senega, and pennyroyal.

Juniperus sabina, (savine.) This is a powerfully stimulating article, and as an emmenagogue, has been used with considerable effect. It has also long been used for the purpose of producing abortion, and no doubt possesses considerable power in this way. Galen asserts that it acts with sufficient energy on the uterus to destroy the fœtus;§ and in the present day, it is said to be constantly used by the negresses in the Isle of France with this intention.||

In the case of Miss Burns, for whose murder Mr. Angus was tried at Lancaster, in 1808, there is reason to believe, from the testimony offered, that savine oil had been administered to effect an abortion. That it does not always succeed, is evident from a case related by Foderé. In 1790, a poor, imbecile, and cachectic girl, in the duchy of Aoust, in the seventh month of her pregnancy, took from the hands of her seducer a glass of wine, in which there was mixed a large dose of powdered savine. She became so ill, that report of it was made to the magistrate, who ordered Foderé to visit her. The patient stated to him, that on taking the drug, she had felt a burning heat, accompanied with hiccup and vomiting. This was followed by a violent fever, which continued for fifteen days. By the proper use of refrige-

* Memoirs of the Medical Society of London, vol. 2, p. 208.

† Medico-Chirurgical Review, vol. 17, p. 98.

‡ Medical Jurisprudence, by Paris and Fonblanque, vol. 3, p. 94.

§ Dictionnaire Matière Médicale, vol. 3, p. 696. || Ibid.

rants, however, she recovered, and at the end of two months was safely delivered of a healthy child.*

In another case, recorded by Murray, while it was successful in producing an abortion, it destroyed the life of the mother.† Professor Christison relates, on authority of Mr. Cockson, the case of a girl, who, to produce abortion, took a strong infusion of savine leaves. Violent pain in the abdomen, and distressing stranguery ensued. In two days after taking it, she miscarried; and in four after that, she died. On dissection, Mr. Cockson found extensive peritoneal inflammation—the inside of the stomach of a red tint, chequered with patches of florid extravasation. The uterus presented all the signs of recent delivery.‡

Mercury. This has long been considered as an article capable of occasioning abortion. Crude quicksilver was at one time supposed to possess this property. It was accordingly used, not merely for this purpose, but also in all cases of difficult labour. It was not long, however, before it was ascertained that large quantities of it might be taken by pregnant women with perfect impunity. Matthiolus relates of several pregnant women, each of whom drank a pound of quicksilver to cause abortion, without any bad effect.§ The same fact is confirmed by Fernelius.|| *Calomel*, however, is the preparation of mercury most generally supposed to exert a specific influence upon the uterine organs. That it possesses the power of producing miscarriage, is countenanced by the authority of Mr. Burns, who directs that a full course of mercury should be avoided during pregnancy.¶ Facts, however, both numerous and conclusive, are on record to prove, that a pregnant woman may go through a long course of mercury, without the least injury either to herself or to the child. Bartholin and Mauriceau relate several cases, in which mercury was given, to salivation, to pregnant women affected with syphilis, and who all, at their full time, were safely delivered of healthy

* Fodéré, vol. 4, p. 431.

† "Fœmina triginta annorum, abortum medicans, infusum sabinæ ingessit; unde insignis vomitus continuus. Aliquot dies post sensit diros dolores; tandem abortus successit, cum insigni hæmorrhagia uteri, dein mors. In cadavere vesicula follea rupta apparuit, cum effusione bilis in abdomen, et inflammatione intestinorum." B. I. And Murray, apparatus medicaminum, &c., vol. 1, p. 59.

‡ Treatise on Poisons, p. 531–2. Second edition. § James' Dispensatory.

|| Vidi mulieres qui libras ejus biberunt ut abortum facerent, et sine noxa. (Fernelius.) ¶ Midwifery, pp. 231, 233.

children.* Mr. Benjamin Bell, than whom I could not quote higher authority, says, "It is a prevailing opinion, that mercury is apt to occasion abortion, and it is therefore seldom given during pregnancy. Much experience, however," he adds, "has convinced me that this opinion is *not* well founded, and when managed with caution, that it may be given in sufficient quantities at every period of pregnancy, for curing every symptom of syphilis, and *without doing the least injury either to the mother or child.*"† To the same effect is the testimony of Dr. Rush concerning the use of calomel in the yellow fever of 1793. In not a single instance did it prove injurious to pregnant women.‡ The following case which fell under my own care, confirmed me in the opinion already advanced. A female, eight months gone with child, was attacked with a violent inflammation of the lungs. After the use of the ordinary depleting remedies, I found it advisable to have recourse to mercury. She was accordingly put upon the use of small doses of calomel and James' powder. In a few days, salivation came on; after which, all the symptoms of her pulmonary complaint speedily vanished, and the patient was restored to her usual health. She was afterwards delivered of a living child at the full period.

Dr. Campbell states that he was once asked to visit a young girl, whom he found so violently salivated, with a view to excite abortion, that her tongue could be compared to nothing else than a honey-comb. But notwithstanding her extreme suffering, she went to the full time.§ At the same time there can be no question that the preparations of mercury, if given to patients *predisposed to abortion*, and especially if carried so far as to produce salivation, may be followed by that result.

Polygala seneka. This article has now been known and used in this country for a number of years, for the purpose of acting on the uterine organs, with the view of restoring menstrual secretion. The first notice which I have met with, of its properties in this respect, is in an inaugural dissertation by Dr. Thomas Massie of Virginia, published in 1803. By him the action of it on the uterus is especially noticed; and the authority of Dr.

* Foderé, vol. 4, p. 429.

† Bell on the Venereal, vol. 2, p. 265. American edition.

‡ Medical Observations and Inquiries, vol. 3, pp. 249, 309.

§ Introduction to the Study and Practice of Midwifery. By Wm. Campbell, M. D. p. 142.

Archer of Maryland is given, of its being used by the common people in that state, for the purpose of procuring abortion.* That it may possess some power as an abortive, may be inferred from its acknowledged power as an emmenagogue.†

Pennyroyal. This article is reputed by some to be a powerful abortive. Dr. Watkins relates a case, in which the mere odour of it produced abortion in a delicate woman in the fourth month.‡ At the Chelmsford assizes, August 1820, Robin Collins was indicted for administering steel-filings and pennyroyal water to a woman, with the intent to procure abortion. He was convicted, and sentenced to transportation for fourteen years.§

Besides the foregoing articles, belonging to the class of emmenagogues, there are others which are entitled to a place under the class of abortive agents.

Secale cornutum—spurred rye—ergot. This article, at present so fashionable in obstetric practice, was first announced to the profession in this country in the year 1807, by Dr. John Stearns of New York, as a substance capable of accelerating, in an extraordinary manner, the process of parturition. As might naturally be expected from the announcement of a remedy so novel and unique, it excited much interest, and as soon as subsequent experience had confirmed its virtues, rose at once into the most unlimited popularity. In the year 1812, it was suggested by the editors of the New England Journal of Medicine and Surgery, that while fully convinced of the parturient powers of the ergot, they were apprehensive that an evil of great magnitude not unfrequently resulted from its use; and that was, the death of the child. They stated that they had been led to this apprehension, from “observing that in a large proportion of cases where the ergot was employed, the children did not respire for an unusual length of time after the birth, and in several cases the children were irrecoverably dead.”|| The observations of numbers of highly respectable physicians since that period, have tended but too strikingly to confirm this melancholy fact. At present, it will scarcely be denied by any one acquainted with the operation of ergot, that if given in very large doses, or at improper periods,

* Medical Theses. By Charles Caldwell, M. D. vol. 2, p. 203.

† See paper of Dr. Hartshorne in Eclectic Repertory, vol. 2, p. 201.

‡ Cox's Medical Museum, vol. 2, p. 431. § Paris and Fonblanque, vol. 3, p. 88.

|| Vol. 1, p. 70.

it will but too certainly prove detrimental to the life of the child.* It is to be feared, that for this purpose it has been but too frequently used in this country. It cannot, therefore, be too strongly insisted upon, that the life of the mother is equally jeopardized with that of the child, by its improper use. By some it has been doubted whether the ergot is capable of producing an abortion, or whether its action is limited to the full period of utero-gestation, and when the uterus is beginning to act itself for the purpose of unloading its contents. That it does possess the power of causing abortion at any period would seem to be proved by experiments made upon animals;† and Dr. Chatard records a case of abortion induced in the human female subject at the fourth month of pregnancy, by twelve grains of ergot.‡ Notwithstanding all this, it is a fact that ergot is no more infallible as an abortive, than any of the agents already noticed. Dr. Condie states that several instances have come to his knowledge, in which the ergot was employed to the extent of several drachms a day, for the express purpose of inducing abortion, but without exerting the least effect upon the uterus. In all these cases gestation continued for the full period, and the females were delivered of living children. He also states that he has known the ergot to be given in large and repeated doses, by ignorant midwives, where pains simulating those of parturition have occurred towards the termination of utero-gestation, in order to quicken the labour; but so far from doing this, the pains have actually ceased under its use, and labour has not occurred for several weeks subsequently.§ I have myself met with one case in which a female who had had several children, took of her own accord three drachms of ergot to produce an abortion, without any effect.

Actæa racemosa. The common name of this plant, is the *black cohosh*, or the *squaw root*. It is a common plant, found in every part of the United States, and the root of it is a good deal used

* For testimony on this point, I refer to the following authorities: New York Medical Repository, vol. 12, p. 344; vol. 20, p. 11; vol. 21, pp. 23, 139. New England Journal of Medicine and Surgery, vol. 1, p. 70; vol. 2, p. 353; vol. 5, p. 161; vol. 7, p. 216; vol. 8, p. 121. New York Medical and Physical Journal, vol. 1, pp. 205, 278; vol. 2, p. 30: and more particularly a paper by Mr. Chavasse of Birmingham, published originally in 4th vol. of the Trans. of the Provincial Med. and Surg. Association, and reprinted in the Transactions of the Med. Society, of the State of New York, vol. 3, p. 348. This paper contains a number of facts worthy of the most attentive consideration.

† Philadelphia Journal of Medical and Physical Sciences, vol. 11, pp. 112-13.

‡ New York Medical Repository, vol. 21, p. 16.

§ American Journal of Medical Sciences, vol. 10, p. 227.

by some of our American practitioners. Recently, it has been brought into notice, as an article possessing powers analogous to those of the ergot. By our native Indians, it appears to have been long supposed to possess properties of this sort, and Mr. Rafinesque states that it is "much used by them in facilitating parturitions, whence its name—squaw root." Dr. Tully, in a paper on this subject, has recorded the testimony of a number of respectable physicians, who have used this article for this purpose; and as they state, with decided success, acting very much in the same way as the ergot. A fluid drachm of the saturated alcoholic tincture acted as a sufficient dose, without being repeated.* According to Dr. Tully, the actæa does not appear to exert the same stupefying and deleterious influence on the fœtus, that he supposes is produced by the ergot.

Digitalis. Of the effect of this active drug upon the uterine system, the following case is related by Dr. Campbell. "A married female, aged 26, fair complexion, relaxed, delicate habits, but not spare, the mother of several children, had ascites in her former confinement, and applied for the same complaint, when in the eighth month of this, her fourth pregnancy. In the course of twelve days, she took six drachms of the tincture of digitalis. On the twelfth day, at two A. M., the fœtus, still-born, was thrown off before assistance could be afforded to her; and in twelve hours and a half afterwards, the woman herself expired, although she was in the most favourable state when left after her delivery. The child seemed to have been but a very short time dead, for it exhibited no evidences of putrefaction. The body was examined twenty-five hours after death; it was running rapidly into putrefaction. About three pounds of water were contained in the chest; in the pericardium were found a few ounces of sero-sanguineous fluid; in the abdomen, the effusion was very trifling."†

Among the *local means* used for procuring abortion there are only two which require to be noticed.

Blows and other injuries on the loins and abdomen. In cases where severe blows have been received on the back, the danger of abortion is always imminent. It is, indeed, rare that a female

* *Actæa racemosa.* By William Tully, M. D. Professor of Materia Medica, in Yale College, in the Boston Medical and Surgical Journal for April 10, 1833.

† Introduction to the Study and Practice of Midwifery, p. 141.

goes to her full time when she has received such an injury. Blows on the abdomen are equally dangerous; and in most cases of this kind, a considerable hæmorrhage precedes the death of the fœtus. In disputed cases, where it is denied that the injury inflicted has caused the abortion, we should attend to the two following circumstances: First, whether the violence offered was sufficiently great to be considered as the sole cause; and second, whether the female was not disposed to abortion, and had failed in some precautions, or committed some imprudence, which might have induced it. After investigating these facts, we ought to inquire whether the accused knew of the pregnancy of the female, or whether she had not provoked the blows which she received. Two cases from Belloc may serve to illustrate these distinctions. A young woman, between the third and fourth months of her pregnancy, had received, from a robust man several kicks and blows with the fist, the marks of which were very evident. Immediately after the accident, she was put to bed, bled, and various remedies given by a surgeon. The hæmorrhage, however, continued, with pains in the loins and abdomen, and on the next day she had an abortion. Belloc, on being examined, declared that the abortion was owing to the violence which had been inflicted.* In another case, a female brought forth a dead fœtus, four months advanced, two days after a quarrel with her husband, in which she said he had struck her. Instead, however, of lying down, or at least keeping quiet, she walked a league that day, and on the next a quarter of a league, to a place where she was to aid in bringing in the harvest; nor was it until her arrival there, that she was forced to go to bed. In this case, Belloc decides that it is very possible, had she remained quiet, and called for proper aid, the abortion would not have taken place, particularly as the violence used was only that of throwing her down in the street.†

With regard to this cause of abortion, as well as the others that have been mentioned, it is to be understood that the life of the *mother* is equally exposed with that of the child. The following case, related by Dr. Smith, illustrates this fact in a striking manner, and is only one of a number which might be adduced. In 1811, a man was executed at Stafford for the murder of his

* Belloc, p. 81.

† Cours de Médecine Légale, par J. J. Belloc. p. 82.

wife. She was in the pregnant state, and he had attempted to induce abortion in the most violent manner, as by elbowing her in bed, rolling over her, &c. ; in which he succeeded—not only procuring abortion, but along with it the death of the unfortunate woman.*

By Dr. Campbell, a case is recorded of a female, who, in the last month of pregnancy, was struck on the abdomen by her husband. An extensive detachment of the placenta caused the immediate death of the fœtus, and that of the mother in fifty-one hours afterwards.†

The introduction of instruments into the uterus for the purpose of rupturing the membranes, and thus bringing on premature action of the womb. Of this villanous practice, which has long been known and resorted to for the nefarious purpose of producing abortion, I shall say nothing more than to give the history of a few cases in which it was used, and which will show the effects with which it is attended. “ At Durham assizes, in 1781, Margaret Tinkler was indicted for the murder of Janet Parkinson, by inserting pieces of wood into her womb. The deceased took her bed on the second of July, and from that period thought she must die, making use of various expressions to that effect. She died on the 23d. During her illness, she declared that she was with child by a married man ; and he, being fearful, should she be brought to bed, that the knowledge of the circumstance would reach his wife, advised her to go to the prisoner, who was a midwife, to take her advice how to get rid of the child—being at the time five or six months gone. The delivery took place on the 10th of July, three days previous to which, a person saw the deceased in the prisoner’s bed-chamber, when the prisoner took her round the waist, and shook her in a violent manner five or six different times, and tossed her up and down. She was afterwards delivered at the prisoner’s house. The child was born alive, but died instantly, and it was proved by surgeons to be perfect. There was no doubt but that the deceased had died by the acceleration of the birth of the child ; and upon opening the womb of the mother, it appeared that there were two holes caused by wooden skewers, one of which was mortified and the

* Smith’s Forensic Medicine, p. 305.

† Introduction to the Study and Practice of Midwifery, &c. p. 137.

other inflamed. Additional symptoms of injury were also discovered.”*

In England a very curious trial took place in 1808, of two persons, William Pizzy and Mary Codd, “for feloniously administering a certain noxious and destructive substance to Ann Cheney, with intent to produce a miscarriage.” On the trial, it appeared that they had given medicines several times, to produce the abortion without any effect. In consequence of this failure, Pizzy, who was a farrier, introduced an instrument into the vagina, and in that way, destroyed the child and brought on premature delivery. This took place about six or seven weeks before the full time. Although the facts appeared very clear on the trial, yet the jury brought in a verdict of acquittal.†

By Foderé and Ristelheuber a case is related, in which rupture of the uterus and death was occasioned by the introduction of a syringe with a long ivory pipe, for the purpose of producing abortion. On dissection, a fœtus of about two months was discovered in the abdomen.‡

By Dr. Baxter, of New York, another case is recorded, in which he was called to a female who had employed a person to procure an abortion by the introduction of a silver catheter. The only effect however, was that of wounding the os tincæ, and rupturing the membranes without expelling the fœtus. Fifteen days after the perpetration of the deed, Dr. Baxter found her in terrible pains, and having bled her twice without relief, he gave her ergot, to facilitate the delivery of the fœtus, which very shortly brought it away. It was perfect, and about four months old. Unfortunately, the names of the persons concerned in this infamous transaction, were never divulged.§

I will record only one case more, the particulars of which I have recently been favoured with. A few years since a trial took place in the State of Vermont, in the case of Norman Cleaveland, who was indicted and tried for the murder of Hannah Rose. It appeared in evidence that Hannah Rose had become pregnant by the accused, and was about four months gone in her pregnancy, and that he had tried various means to produce an abortion, but without effect. After this he resorted

* East's Crown Law, vol. 1, p. 354. Smith, p. 306.

† Edinburgh Medical and Surgical Journal, vol. 6, p. 244.

‡ Medico-Chirurg. Review, vol. 6, p. 528.

§ The Medical Recorder, vol. 8, p. 461, for 1825.

to the introduction of a sharp pointed instrument into the vagina, and with the fatal result of immediately destroying the female herself. On a post mortem examination, the neck of the uterus was found punctured in six places, each puncture being from half an inch to three-fourths of an inch wide. The punctures appeared to have been made by a two-edged instrument like a lancet. In addition to this, the iliac vein was wounded, and the abdomen filled with coagulated blood. The prisoner was convicted and sentenced to be hung. The punishment was afterwards, however, commuted by the Legislature to five years' hard labour in the State prison.*

A most extraordinary mode of causing abortion recently occurred in France, which may perhaps be appropriately noticed in this place. The subject was a married woman, who had four children, and was pregnant of a fifth. At the commencement of her pregnancy, she was persuaded by the representations of another female, to inject sulphuric acid into the vagina as an easy mode of inducing premature labour. As may readily be imagined, excessive inflammation of the parts took place, together with great general constitutional disturbance, and the final result was an almost complete obliteration of the vagina. "The medical men on examination, found that a kind of irregular band surrounded and obstructed the vagina, beyond which, and on the brim of the pelvis, the head of the infant was distinctly felt, pressed forward by the uterine contractions. It was resolved to make an incision through the dense membrane, but when this was done, it was found it had adhered to the bladder, which the incision had completely divided. The delivery was not at all facilitated, and the attendants felt themselves compelled to perform the cæsarean operation. The infant was extracted dead, apparently for some time, and the mother immediately expired."†

* For the particulars of this case, I am indebted to Judge Hutchinson of Woodstock, Vermont. In connexion with this subject, the following instructive fact is related by Dr. Gooch. "Dr. William Hunter, attempted this operation (introducing an instrument to puncture the membranes) on a young woman, at about the third month of pregnancy. He found that he several times punctured the cervix uteri, and the case terminated fatally. If this happened to one of so much anatomical knowledge and skill, how much more probable must it be in the hands of those ignorant men, by whom, for the purpose alluded to, the operation is sometimes undertaken! No doubt these attempts often prove fatal, but the murdered do not tell tales." A practical compendium of Midwifery, by Robert Gooch, M. D. p. 94. Amer. Ed.

† Lancet, vol. 8, p. 38.

Having thus finished the notice which I proposed to take of the methods which have been resorted to for criminally producing abortion, I must again insist upon a circumstance, already adverted to, but which cannot be too often repeated; and this is, the danger which necessarily attends the life of the mother in every attempt of this sort. Even in cases where miscarriage results from involuntary causes, and where every prudential measure has been adopted for obviating its consequences, it is well known that the mother frequently falls a victim. How much more likely is this to be the result when the miscarriage is occasioned by great and unnatural violence done to the system, and that too under circumstances, which generally shut out the wretched sufferer, from the benefit of all medical succour. Velpeau states that he had a female under his care, who produced a violent abdominal inflammation by taking medicines to promote abortion. She died on the eighth day, without any symptoms of abortion having appeared.* There is another circumstance also of great importance, which should not be forgotten. It has happened in some instances, that while the mother has lost her life in attempting to procure a miscarriage, the child has actually been born alive and survived. A case of this kind was witnessed by Foderé in 1791. A cook finding herself pregnant, and not being longer able to conceal it, obtained half an ounce of powdered cantharides and mixed it with an ounce of sulphate of magnesia, and took them down in order to produce abortion. Some hours after, she was seized with violent colic, and brought forth a *living child*, in the most horrible pains. During the succeeding night she died.† If these facts were more generally known, I suspect the attempts at abortion would be much less frequent than they are at present. With regard to the accessaries and accomplices in this crime, it would be well for them to remember, that in every experiment of this kind which they make, they take upon themselves the awful responsibility of jeopardizing not merely a single life, but two lives.

It results, therefore, from what has been said, concerning the means of producing abortion,

1. That all of them are *uncertain* in their operation upon the foetus.

* Meigs' Velpeau, p. 236.

† Foderé, vol. 4, p. 436.

2. That they always endanger the life of the mother, and

3. That they sometimes destroy the mother without affecting the fœtus.

I deem it so important to enforce these results, that I shall confirm them by the following authorities. "It is evident, I believe, from experience," says Farr, "that such things, (abortives,) cannot act as efficient causes, without the aid of those predisposing causes, or natural habits of the body, which are necessary to concur with them. As attempts of this kind, however, should not be passed off with impunity, and *as the life of the mother as well as the child* is endangered by such exhibitions, if advised by any other, they should be considered as highly culpable, and for this reason should be made known."*

"Every woman," says Bartley, "who attempts to promote abortion, *does it at the hazard of her life*. It may be remarked, whoever endeavours to counteract the ordinary proceeding of nature, will have in the end sufficient cause to repent the temerity."†

"There is no drug," says Male, "which will produce miscarriage in women not predisposed to it, *without acting violently on the system, and probably endangering their lives*."‡

Smith says, "Abortion is, in general, injurious to health, and is seldom unaccompanied with suffering. The administration of emmenagogues to force a separation of the ovum, where the constitution has no tendency to throw it off, *is highly dangerous to the mother*. No drugs can act in this way upon the uterus, but by involving it in a violent shock given to the general system. *It has frequently occurred, that the unhappy mother has herself been the sacrifice, while the object intended has not been accomplished*."§

Burns says, "It cannot be too generally known, that when these medicines do produce abortion, the mother can seldom survive their effect."||

To show how difficult the perpetration of abortion sometimes is, the following case will serve as an illustration. "A young woman, seven months gone with child, had employed savine and other drugs, with a view to produce a miscarriage. As these had not the desired effect, a strong leather strap (the thong of a

* Farr's Elements of Medical Jurisprudence. p. 70.

† Bartley's Treatise on Forensic Medicine, p. 5.

‡ Male's Epitome of Juridical Medicine, in Cooper's Tracts, p. 208.

§ Smith's principle of Forensic medicine, p. 295. || Principles of Midwifery, p. 283

skate) was tightly bound round her body. This, too, availing nothing, her paramour (according to his own confession) knelt upon her, and compressed the abdomen with all his strength; yet neither did this effect the desired object. The man now trampled on the girl's person while she lay on her back; and as this also failed, he took a sharp pointed pair of scissors, and proceeded to perforate the uterus through the vagina; much pain and hæmorrhage ensued, but did not last long. The woman's health did not suffer in the least, and pretty much about the regular time, a living child was brought into the world, without any marks of external injury upon it. It died indeed four days afterwards, but its death could not be traced to the violence inflicted on the mother's person; all the internal organs appeared normal and healthy."*

Velpeau makes the following statement in relation to the consequences of using instruments to procure abortion. "Those who make use of them, most frequently fail of attaining their object, and succeed only in seriously injuring the womb. I once prescribed for a female, in whom such attempts had brought on a flooding which conducted her to the verge of the grave; she suffered horribly from pain in the interior of the pelvis for two months, notwithstanding which, abortion did not take place, and she is now a prey to a large ulcer of the neck of the womb. I opened the body of an unhappy creature who suffered from like attempts, which did not succeed any better than the one above mentioned. M. Girard, of Lyons, mentions a similar instance. Very recently, also, (Oct. 1828,) a young woman who became pregnant against her wishes, succeeded by such manœuvres only in producing an organic lesion of the uterus, which, after frightful suffering, led her to the commission of suicide."†

II. *Of the involuntary causes of abortion.* Of these it is not necessary to say much. They should always, however, be kept in view in medico-legal investigations on this subject, so that we may not attribute to criminal interference what is owing to some morbid derangement. Diseases of various kinds, as rheumatism, pleurisy, small pox, typhus and yellow fevers, scarlatina, syphilis, and measles, operating on a system predisposed by nervous irritability—a diseased state of the uterus—the intemperate use of spirituous liquors—irritation of the neighbouring organs, from cos-

* Professor Wagner, in the London Medical Quarterly Review, vol. 2, p. 487.

† Meigs' Velpeau, p. 236.

tiveness, tenesmus of dysentery, hæmorrhoids, prolapsus ani, diarrhœa, incontinence of urine—the irritation produced by medicines*—errors in regimen and diet—violent exercise, as in walking, dancing, riding, running, &c—accidental falls—a sudden contortion or shock† of the body—indulgence of any violent passion of the mind, whether joyful or sad—the relation of any unexpected intelligence—a great noise‡—the appearance of any extraordinary object—previous abortion—fluor albus—excessive venery—accidental blows on the abdomen—the death of the fœtus—the attachment of the placenta over the os uteri—retroversion of the womb—hæmorrhage, from whatever source, or at any period all or any of these causes may give rise to abortion, without the imputation of the least criminality to the female.

The influence of the passions upon the uterine functions is peculiarly striking. It is an extraordinary fact, that the melancholy and sadness caused by some great evil which is known and expected, are much less injurious to a pregnant woman, than the annunciation of some important good, or even a trifling misfortune which is unexpected. Foderé relates the case of some pregnant women, who, during the horrors of the French revolution, were confined in dungeons, and condemned to death; their execution was, however, delayed in consequence of the peculiarity of their situation. Yet, notwithstanding the actual wretchedness of their condition, and the more terrible anticipation of future suffering, they went on to the full time, during which period, a fortunate change in the state of parties rescued them from unmerited punishment.”*

* Dr. Dewees states that he has seen two cases of premature labour, resulting, as he had reason to believe, from the action of blisters. *A Treatise on the Diseases of Females*, p. 128.

† The pulling of a tooth, for instance has been known to produce abortion. *Burns on Abortion*, p. 64.

‡ A case, in which a *great noise* as a cause of miscarriage was involved, was tried in 1809, at the quarter sessions of Franklin county, in Pennsylvania. The indictment charged that Taylor, (the defendant) unlawfully, *secretly*, and maliciously, with force and arms, broke and entered at night the dwelling-house of James Strain, with intent to disturb the peace of the commonwealth; and after entering the house, unlawfully, wilfully, and turbulently, *made a great noise*, in disturbance of the peace of the commonwealth, and did greatly misbehave in said dwelling-house, and did greatly frighten and alarm the wife of said Strain, whereby she *miscarried*, &c. The offence was held indictable as a *misdeemeanor*. The jury found the defendant guilty; but the quarter sessions arrested the judgment upon the ground, that the offence charged was not indictable. The supreme court decided in this case, that the judgment should be reversed, and the quarter sessions were directed to proceed to give judgment against the defendant. *Binney's Reports*, vol. 5, 277.

* Foderé, vol. 4, p. 422.

Circumstantial evidence. In concluding the subject of fœticide, I shall make a remark or two upon the circumstantial evidence which may be adduced to prove the guilt of the accused. With regard to a female *concealing her pregnancy*, I cannot conceive with what justice any inference can be drawn prejudicial to her character. If her pregnancy be the result of illicit commerce, it is perfectly natural that she should make use of every effort to conceal her disgrace as long as possible. The mere fact of concealment, even if proved, ought to be considered as no evidence whatever of her guilt.

If she has been known to apply frequently, to the same or to different physicians to be bled, especially in the foot; if she has endeavoured to procure any of the medicines usually given to produce this effect, if any are found in her possession, or if she can be convicted of actually taking them without medical advice, we have then the strongest circumstantial evidence which the nature of the case admits of, to pronounce her *intention* to have been criminal. These are circumstances, however, which do not strictly come under the cognizance of the professional witness; they are matters of fact, which must be decided upon from the testimony which may be offered by the other witnesses cited to appear in the case.

II. *Of the murder of the child after it is born, with an account of its various proofs and modes of perpetration.*

In every case in which an infant is found dead, and becomes the subject of judicial investigation, the great questions which present themselves for inquiry, are,

1. What is the age of the child?
2. Was the child born alive?
3. If born alive, how long had it lived?
4. If born alive, by what means did it come to its death?

Having come to the conclusion that the death of the child is owing to violence, it is next to be ascertained who the perpetrator of it is. Should suspicion light upon a female as being the mother of it, the questions to be determined concerning her, are,

1. Whether she has been delivered of a child? And,
2. Whether the signs of delivery correspond as to time, &c. with the appearances observed on the child?

These are the only points upon which the *professional witness* can be called to give his testimony, and to the consideration of these I shall accordingly confine myself.

Quest. I. *What is the age of the child?*

The importance of determining the age or degree of maturity of the child is so evident as to need no discussion. In all cases, therefore, it should be particularly investigated. For the necessary information on this subject, see Chap. VII. Part 2.

Quest. II. *Was the child born alive?*

There are two ways in which a child may be born alive. 1. It may be born, the cord may be pulsating, showing that it is alive, and yet it may not respire. In this state it may continue for a sufficient length of time to die from natural causes, or in consequence of criminal interference, before respiration has commenced. 2. It may be born and respire. The question therefore as to the child's having been born alive, may present itself in either of these forms, and requires investigation.

1. *Of the child born alive but not respiring.*

It must be evident that when a child is born alive, but has not yet respired, its condition is precisely like that of the fœtus in utero. It lives merely because the fœtal circulation is still going on. In this case none of the organs undergo any changes. The lungs remain as they are in the fœtus, and the organs circulating the blood are in the same state. If, therefore, it die before respiration commences, there are no changes which have taken place, by which the fact of previous vitality could be established. This simple view shows how impossible it would be to prove that a child had been born alive, independently of respiration. In cases where wounds and ecchymoses are found on the body of the child, indirect evidence might be obtained from this source as to the existence of life at the time they were received. An interesting case of this kind is recorded by Devergie, an account of which will be found in a subsequent part of this chapter under the head of "Examinations and Reports." At best, however, this could only apply to a very few cases. Where this kind of proof is absent, we have no means of deciding the question

2. *Of the child born alive and respiring.*

Here respiration constitutes the test of a child's having been born alive, and the great point, therefore, to be settled is *whether the child has respired*. The proofs by which this is to be esta-

blished are all deduced from certain changes which take place in the system, as soon as the vital process of respiration commences. These changes show themselves, not merely in the lungs, but in various other parts of the system—and it is only by examining them in an extended way that we can arrive at just and satisfactory conclusions.

They may be conveniently divided into three sections.

1. Proofs derived from the circulating system.
2. Proofs derived from the respiratory organs.
3. Proofs derived from the abdominal organs.

I. *Proofs of respiration, derived from the circulating system.*

There are two things in connexion with this which require investigation: *the character of the blood itself, and the condition of the heart and vessels circulating the blood.*

1. *Of the character of the blood itself.* By some eminent authorities, it is asserted that there is no difference in appearance between the arterial and venous blood of the fœtus. Bichat investigated this point particularly, and he states that he made numerous dissections of young guinea pigs while yet in the womb of their mother, and he uniformly found the blood of the arteries and veins presenting the same appearance, resembling the venous blood of the adult. Not the slightest difference was observed between the blood taken from the aorta, and that from the vena cava, nor between that drawn from the carotid artery and the jugular vein. He made the same observations in three experiments of a similar nature upon the fœtuses of dogs. He also frequently dissected human fœtuses who died in the womb, and found the same uniformity in the arterial and venous blood. From these facts, he concludes, that no difference exists between the arterial and venous blood of the fœtus, at least in external appearance.* Velpeau and Autenreith, as the result of their experiments and observations, confirm this statement.† By other observers this is positively contradicted; and it is asserted, that the difference between the blood of the arteries and veins is very obvious.‡ By Dr. Jeffrey, the following experiment was made. He took part of the umbilical cord and dissected away the gelatinous part of it, until he had laid bare the vessels, when on puncturing them, he found there was a difference between

* Bichat's General Anatomy, translated by Hayward, vol. 1. p. 355.

† Velpeau's Midwifery, p. 219.

‡ Bostock's Physiology, vol. 2, p. 157. American edition.

the blood in the vein and the arteries.* A simpler mode of performing this experiment, suggested by Mr. Carr of Sheffield, is the following. As soon as the child is born and the cord divided, take the placental portion of it, around the end of which a ligature has been previously applied, and cut it two or three inches from the ligature with a sharp scalpel, so as to make an even surface. If the portion of cord be now pressed from below upwards, the blood flowing from the vein and that from the arteries will be found very different. "Sometimes a large drop of florid blood is observed to stand directly over the umbilical vein, and another dark coloured over the arteries, without their being in the least mingled with each other, and in this case, the difference between the two is so striking that no one can fail to observe it."† In relation to this experiment, it is to be remarked, that to render it of any force in controverting the observations of Bichat, it ought to be made upon the *still-born* child, in whom respiration has never taken place. Performed upon the child which has been born alive and breathed, the difference between the arterial and venous blood is just what might have been expected.

Of its coagulation. By some it has been supposed that the blood of the fœtus does not coagulate. This, however, is a mistake. But although the fœtal blood does coagulate like adult blood, yet there is this difference between them, that the coagulation of the former is by no means so firm and solid as that of the latter. This was originally observed by Fourcroy,‡ and has since been confirmed by other observers.

The effect of exposing the fœtal blood to the action of the atmosphere. In the experiments made by Fourcroy, the coagulum, of a brown red, exposed to the atmosphere, did not become florid in the same manner as that of the adult. There were, however, filaments of a red colour running over the brown mass,§ giving it a veined appearance. By others, this is controverted; and Dr. Blundell states that it can easily be proved that the blood of the fœtus does become florid, by taking it from the umbilical vessels, and setting it aside, exposed in a cup to the action of the atmosphere. In a very short time, he says, it will be found to undergo a change to a bright red colour; and if the clot be cut

* The Physiology of the Fœtus, Liver, and Spleen, by George C. Holland, M. D. p. 154.

† Physiology of the Fœtus, &c. by George C. Holland, M. D. p. 154.

‡ Annales de Chimie, tom. 7, p. 162.

§ Ibid, p. 16.

vertically in two,* the contrast between the exposed and unexposed parts will be very striking. Here too the same remark is applicable, that was made in relation to the experiments of Drs. Jeffrey and Carr. The blood which is exposed ought to be that of the fœtus which has not respired. The blood taken from the umbilical vessels in ordinary cases of delivery, where the child is born alive, and has breathed, is not fœtal blood. Whether this precaution was observed by Dr. Blundell, does not appear from his statement.

Chemical composition of fœtal blood. On this subject, I believe we have nothing but the analysis of Fourcroy. As the result of this, there would seem to be a real difference between the composition of fœtal and adult blood. According to him, the points of difference are the following:—1. In the fœtus the colouring matter is darker, and the blood is not so susceptible of taking the brilliant red shade, on exposure to the atmosphere. 2. It contains no fibrous matter; the thickened and coagulated matter which is found in its place, resembles more gelatinous matter. 3. It does not contain any phosphoric acid.†

According to the observations of Fourcroy, Tiedemann and others, it would appear, also, that the proportion of serum in fœtal blood is much larger than in adult blood.‡

In addition to the foregoing, the microscopical observations of MM. Prevost and Dumas, have ascertained that the red globules of the blood in the fœtus differ in their form and volume from those of the adult, the former being much smaller than the latter.§

The foregoing facts and observations, although they go to show that there are some interesting points of difference between the blood before and after respiration has been established, are yet, I fear, of too delicate a nature to be rendered practically available in a question of import so grave as that of infanticide.

2. *The condition of the heart and blood-vessels.* Without going into any elaborate description of the circulation in the fœtal state, it is only necessary to state that there are a number of striking and interesting peculiarities in the organs circulating the blood in the fœtus, which are modified or entirely lost after

* Blundell, in *Lancet*, for 1828, p. 130.

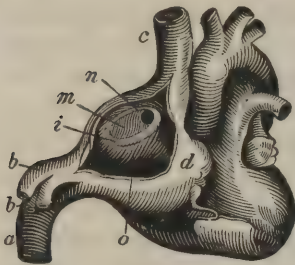
† *Annales de Chimie*, tom. 7, p. 165.

‡ Velpéau's *Midwifery*, p. 218.

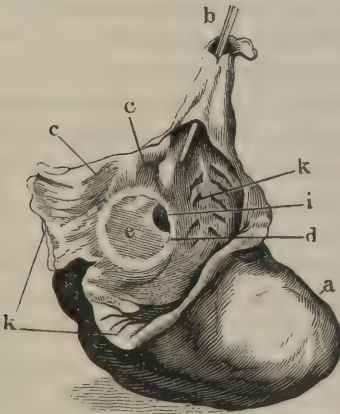
§ Velpéau's *Midwifery*, p. 219; Bostock's *Physiology*, vol. 2, p. 158. Am. ed.

the child is born, and respiration is established. These peculiarities, therefore, require to be specially noticed. They are the *foramen ovale*; the *ductus arteriosus*; the *ductus venosus*; the *umbilical vessels*, and the *cord*.

(a.) The *foramen ovale*. This is an opening situated in the septum which divides the right auricle from the left, and through it part of the blood is conveyed directly from the right to the left auricle. It is nearly equal in size to the mouth of the inferior cava, and is supplied with a thin transparent falciform valve, situated on the side of the left auricle. In this way the valve permits the flow of blood into the left auricle, but prevents its return into the right auricle. When the valve is closed, there is generally a small aperture still left open, where the valve falls slack, and is ready to open. The accompanying sketches will render more intelligible the relative situation and appearance of the *foramen ovale*.



- a. The ascending cava, with its hepatic branches, b. b.
- c. The ascending cava.
- d. The right auricle, where it lies against the roots of the aorta and the pulmonary artery.
- i. The circle which surrounds the foramen ovale, sometimes called the *isthmus vieussenii*, but more commonly the *circulus foraminis ovalis*.
- m. The valve of the foramen ovale.
- n. The aperture or opening in the foramen ovale.
- o. The opening towards the ventricle.



This sketch is intended to show the *foramen ovale* still more plainly. Every portion of the fetal heart is cut away, except the ventricles and the partition between the auricles.

- a. The ventricles.
- b. The vena cava, with a blowpipe in it.
- c c. The septum between the auricles laid open to display the foramen ovale.
- k k. The *musculi pectinati*, or muscular fibres of the auricle.
- d. The *circulus foraminis ovalis*.
- e. The valve of the foramen ovale.
- i. The aperture of the valve, where the valve falls slack and opens.

After birth, the foramen becomes obliterated by the closure and adhesion of the valve, and leaves behind it in the adult nothing but an oval depression in the septum between the auricles. This depression is called the *fossa ovalis*, and corresponds to the space occupied in the fœtus by the foramen ovale.* In the fœtal state, and anterior to respiration, this foramen is always open; and it becomes closed in consequence of the blood taking a new route through the lungs, when respiration commences. If, therefore, in examining any case, the foramen ovale be found closed, it is a decisive evidence of the child's having been born alive. It is to be recollected, however, that this closing and obliteration of the foramen ovale is a gradual process, taking sometimes from two to three weeks before it is completed. Hence it is obvious, that however strong a proof its closure may be of previous life, yet its being open is no evidence to the contrary. To render the phenomena connected with the foramen ovale available in these cases, it was suggested, originally, I believe, by Professor Bernt of Vienna, that although the complete closure of the foramen ovale does not take place until some days after birth, yet that during all this time it undergoes certain changes, which distinctly mark the period which has elapsed after the birth of the child. That the foramen ovale does undergo a series of changes during the process of obliteration, was remarked so early as 1750 by the English anatomist Ridley, and has since then been confirmed by the observations of anatomists and physiologists. These changes consist mainly in the position of the aperture of the foramen. In the fœtus, anterior to respiration, the aperture of the foramen ovale is always found at the lowest part of the valve; as soon as respiration has commenced, it is gradually turned towards the right; after some weeks, it is elevated still higher; and finally, after revolving as it were around the right edge of the valve, it is found at the *upper*, instead of the *lower* side of it.† In

* Bell's Anatomy, vol. 1, p. 396. American edition. See, also, Meckel's Anatomy, vol. 2, p. 207. American edition, by Doane.

† "1. *In fœtu*, omnino non respirante, hiatus foraminis ovalis *ad imam partem valvulæ* reperitur, per quam sanguis e vena cava ascendente effusus, statim ad sinistrum ventriculū transjiciendus, transmigrat :

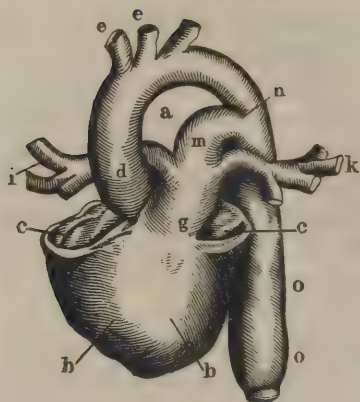
"2. *In infante recens nato*, qui *per paucula momenta respiratione usus est*, apertura istius foraminis e tramite suo pristino jam paululū *dextrorsum deflexa* conspicitur, inde sanguis e vena cava inferiori illuc appellens, cum sanguine e superiori vena cava refluō, per partem foraminis jam clausam novo incepto circuitu decurrit :

"3. *In infante plures septimanas nato*, apertura foraminis *adhuc altius* cum valvula *dextrorsum suspensa* deprehenditur :

other words, as soon as respiration commences, the aperture of the foramen ovale moves gradually from the bottom to the top, and from left to right. Now these changes in the foramen ovale, according to Professor Bernt, will indicate not merely the existence of respiration, but also the different periods during which it has continued. With regard to the validity of this test, however, it must be obvious, that from the gradual manner in which these changes take place, a great many cases must occur in which they can furnish no decisive evidence. For instance, suppose a child had taken only one or two inspirations, sufficient to fill the lungs, and to show that it had actually been born alive, the change in the position of the foramen ovale would be so slight as to render it altogether inappreciable. Besides this, there is another consideration of great importance, which is, that from the very nature of these changes, no one would be competent to decide upon them, unless he had had the good fortune, which falls to the lot of very few, of making a great number of dissections and observations upon the fœtus. In the hands of the generality of physicians, it might lead to numerous and unavoidable errors. In addition to all this, the very observations made by Bernt himself prove that the changes in the foramen ovale do not take place so uniformly and certainly, as to render it safe to draw any positive conclusion from them. On these various accounts, I must confess that I do not attach the same importance to this test as is done by Professor Bernt.

(b.) *The ductus arteriosus.* This is a vessel which passes directly from the pulmonary artery, and enters the aorta just below its arch. It is a vessel of considerable size, being somewhat larger than the aorta itself in the fœtus. It conveys a large portion of the blood sent into the trunk of the pulmonary artery, directly into the aorta.

"4. *In adulto, demum foramen cum sua apertura et valvula plane inversum apparet, adeoque ejus apertura supra tuberculi Loweri marginem inferiorem penitus se recondit, cum valvula eadem transitu temporis, ni impedimentum intercurrat, firmiter adhæsura.*" (*Experimentorum Docimasiam Pulmonum Hydrostaticam Illustrantium. Centuriæ i. Sectio ii. Curante Josepho Bernt. Prefatio, p. xii. Viennæ, 1824.*)



- b. b. The ventricles of the heart.
- c. c. The places from which the auricles have been cut away.
- d. The root of the aorta, with (e e) its branches.
- g. The pulmonary artery.
- i. The right branch of the pulmonary artery.
- k. The left branch.
- m. The *ductus arteriosus*, running from the pulmonary artery to the aorta, which it joins at n.
- o. o. The aorta, increased in size after the junction of the *ductus arteriosus*.

In this sketch, the *ductus arteriosus* is unnaturally separated from the aorta by pulling it down, and thus leaving the space (a) between them.

In the fœtus, the *ductus arteriosus* will be found open and filled with blood. After birth, it becomes gradually obliterated and the duct itself becomes eventually changed into a ligament.* If, therefore, in any case, this duct is found permanently closed, it is a positive proof that the child has been born alive, and enjoyed life for a longer or shorter period. As, however, its closure does not take place sometimes till two or three weeks after birth, its being found open is no proof that the child was born dead. By Professor Bernt, however, it is urged, that, as in the foramen ovale, a succession of changes takes place which may sufficiently mark the various intervals which have elapsed between them and the birth of the child; and upon these he has founded another test in cases of infanticide, to which he attaches great value. These changes are the following:

State of the ductus arteriosus in the mature fœtus before respiration. Its shape is cylindrical—its length nearly half an inch—its diameter is equal to that of the main trunk of the pulmonary artery and more than double the size of the branches of that artery, each of which is equal to a crow quill.

In a child which has respired a few moments. The duct loses its cylindrical shape—the part towards the aorta becomes con-

* "In the adult, it is so thoroughly obliterated, that by the most careful dissection we can show no other vestige of it than a cordlike adhesion of the aorta and pulmonic artery." (Bell's Anatomy, vol. 1, p. 465. Am. ed.)

According to Meckel, the obliteration of the *ductus arteriosus* leaves behind it, "a round solid cord, a line thick and about four lines long." (Meckel's Anatomy, vol. 2, p. 374. Translated by A. S. Doane, M. D.)

tracted, and the whole duct assumes the shape of a truncated cone, the base of which is towards the pulmonary artery, and the apex towards the aorta; sometimes the contrary is observed.

In a child which has lived for several hours or for a day. It now recovers its cylindrical shape, but is greatly diminished both in length and diameter. It is now not larger than a goose quill—much less than the main trunk of the pulmonary artery and not more than equal to each of its branches.

In a child which has lived for some days or a week. The duct will now be found wrinkled and shortened to the length of only a few lines, while its diameter is not larger than that of a crow quill; at the same time the diameter of the branches of the pulmonary artery will be found increased to that of a goose quill. Finally, the perfect closure of the duct does not take place until after the lapse of several weeks or months.*

In relation to the foregoing changes as stated by Prof. Bernt, Orfila has reported some observations, and of the eight cases which he details, only four were found to confirm them.

In one case, of a mature still-born fœtus, the ductus arteriosus was found only *half the size of the trunk of the pulmonary artery*; it was cylindrical, half an inch long, and about as large as one of the branches of the pulmonary artery.

In a second case, of a male fœtus eight months old, born dead, the ductus arteriosus was cylindrical, not quite *half the size of the trunk of the pulmonary artery*; larger than the right, and much larger than the left branch of that artery.

In a third case, of a mature female infant which had lived five hours, the ductus arteriosus, so far from being cylindrical, was found dilated at its middle part, and its extremity towards the aorta much larger than that towards the heart; it was *eight lines*

* "1. Si *paucula momenta* recens nati exstiterint, aortam descendente[m] versus sphaeroides, paulo post mutata figura cylindracea, apparuit conus truncatus, basim cordi, apicem aortæ descendentis, aut contra, obvertens :

"2. Si *plures horas diemve* vitam retinuerint, denuo formam cylindraceam, ast longitudinem et latitudinem imminutam, diametrum caulis pennæ anserinæ, adeoque diametro trunci arteriarum pulmonalium longe minorem, et illi *arteriarum binarum pulmonalium* fere parem exhibuit :

"3. Si vitam *ad plures dies septimanamve* perduxerint, canalis jam rugosi longitudo ad lineas aliquot, crassities ad diametrum pennæ corvinæ coarctata, diameter vero *arteriarum pulmonalium* ad crassitudinem caulis pennæ anserinæ aucta conspicitur :

"4. Penitus autem oclusus ductus hic multo serius et incerto hebdomadam mensiumve numero deprehenditur." (Experimentorum Docimasiam Pulmonum, &c. Præfatio, p. xv. xvi.)

in length, and considerably diminished in size. The trunk of the pulmonary artery *was sensibly larger than the left branch of that artery*, but scarcely equalled in size the right branch of this vessel.

In the fourth case, a female infant of full age, having lived nineteen days, the ductus arteriosus was only three lines in length, cylindrical, its size three times less than that of the trunk of the pulmonary artery, *a little less in size than the right branch, but much larger than the left branch of that artery*.*

In four other cases of infants at full age, two of whom were born dead, it was found that the changes in the ductus arteriosus corresponded with the statements of Professor Bernt.

Very recently, Mr. Jennings of England, has reported several cases which tend to support the correctness of the observations of Bernt. In three still-born children, the ductus arteriosus was found cylindrical, nearly as large as the main trunk of the pulmonary artery, and larger than either of the branches. In a fourth child which had breathed freely and died one hour after birth, the ductus arteriosus was conical, with the apex towards the aorta, and smaller than the pulmonary branches.

In a fifth child, which was feeble and died soon after birth, the duct was conical, with the apex towards the aorta, and smaller than the pulmonary branches. The sixth child, was born with the breach presenting and in a state of asphyxia. The lungs were inflated, and it cried, but died shortly after. Here the duct was found conical and considerably smaller than the main pulmonary trunk.†

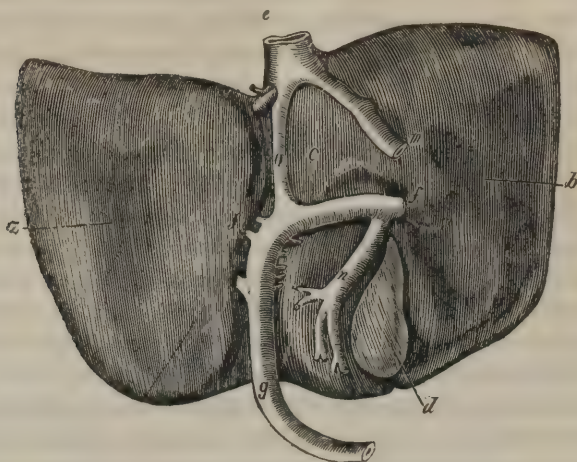
From the foregoing, therefore, I think we may safely conclude, that although the changes in the ductus arteriosus consequent upon respiration, are by no means *invariably* such as are reported by Prof. Bernt, yet they furnish corroborative proof of great value. As they are liable to exception it is evident that they should never be taken except in connexion with the other signs indicative of respiration.

(c.) *The ductus venosus*. This is a vessel lodged in the posterior part of the longitudinal fissure of the liver. It comes off directly from the umbilical vein, and opens with the venæ hepaticæ into the vena cava ascendens. It is large enough to admit a common sized probe, which can easily be introduced into it

* Leçons de Médecine Légale, par M. Orfila, vol. 1, p. 388-9. Second edition.

† Transactions of the Provincial Med. and Surg. Association, vol. 2, p. 450.

through the umbilical vein. Through this vessel, a portion of the blood passing through the umbilical vein, goes directly to the cava and then to the heart.



- a. The left lobe of the liver.
- b. The right lobe.
- c. The lobulus spigelii.
- d. The gall bladder.
- e. The vena cava inferior.

- g. The umbilical vein.
- m m. The hepatic veins.
- n. The vena portæ.
- o. The ductus venosus.

In the fœtus, anterior to respiration, the ductus venosus is always found open. After respiration is established, it gradually contracts, becomes impervious, and is finally converted into a ligament. The period at which it obliterates, varies very much in different cases. In twenty infants, who had lived three days, it was found obliterated.* Generally speaking, this vessel is obliterated before the ductus arteriosus or the foramen ovale. The only inferences that can be drawn from the ductus venosus, are these: if it be obliterated, it is a proof that the child has lived and respired; on the contrary, as it remains open a day or two at least after birth, its being found open is no proof that the child was born dead.

(d.) *The umbilical vessels.* These consist of two arteries and a vein. The former (*the umbilical arteries*) are nothing more than

* Leçons de Médecine Légale, par M. Orfila, vol. 1, p. 384. Second edition.

continuations of the iliac arteries. They mount up along the sides of the urinary bladder, and go directly to the umbilicus, through which they pass, forming with the vein, the umbilical cord. These vessels carry the blood of the fœtus to the placenta. The latter (the *umbilical vein*,) carries the blood from the placenta to the fœtus. It enters the fœtus at the umbilicus, and goes upwards and backwards to the great fissure of the liver. After birth, these vessels become gradually obliterated, and converted into ligaments. The period at which this obliteration takes place, varies in different subjects. It takes place, however, sooner than that of any other of the fœtal openings. In twenty cases of infants who died on the third day, they were in all found obliterated; anterior to this they are open. The only inference, therefore, that can be drawn from finding them closed, is that the child has been alive; at the same time, their being open, is no proof that the child was born dead.

With regard to the whole of the changes which takes place in the circulation after birth, M. Billard has made a number of exceedingly interesting and important observations, which deserve to be recorded.

Children of one day old. In eighteen children of this age, fourteen had the *foramen ovale* completely open; in two, its obliteration had commenced; and in the remaining two, it was completely closed, and passed no blood. In the same infants, thirteen had the *ductus arteriosus*, open and full of blood; in four, its obliteration had commenced; and in one, it was completely obliterated. This last was one of the two that had the *foramen ovale* completely closed. The *umbilical arteries* were open quite to their insertion in the iliac arteries; their calibre, however, was diminished by a remarkable thickening of the coats. In all these children, the *umbilical vein* and the *ductus venosus* were open, and the latter vessel generally gorged with blood.

Children of two days old. In twenty-two infants of this age, fifteen had the *foramen ovale* quite open; in three it was almost obliterated; and in the remaining four entirely closed. In thirteen of the same children, the *ductus arteriosus* was open; in six, the obliteration was commenced; and in three, it was complete. In all of the twenty-two, the *umbilical arteries* were obliterated to a greater or less extent. The *umbilical vein* and *ductus venosus*,

though empty and flat, could yet be passed with a probe of considerable size.

Children of three days old. In twenty-two infants of this age, fourteen had the *foramen ovale* still open; in five, the obliteration had commenced; and in the remaining three it was complete. In fifteen the *ductus arteriosus* was still free; in five, the obliteration had commenced; and in only two was it complete. These two were of the three which had the *foramen ovale* closed. In all the twenty-two, the *umbilical vessels and ductus venosus* were empty, and even obliterated.

Children of four days old. In twenty-seven infants of this age, seventeen had the *foramen ovale* still open; and in six of these this opening was very large and distended, with a great quantity of blood; in eight, the obliteration was commenced, and in two complete. In seventeen, the *ductus arteriosus* was still open; in seven, the obliteration had commenced, and indeed consisted only of a very narrow passage; in the three remaining, the obliteration was complete. The *umbilical arteries* were in almost all, obliterated, near the umbilicus, but were yet capable of being dilated, near their insertion into the iliacs. The *umbilical vein* and the *ductus venosus* were completely empty and very much contracted.

Children of five days old. In twenty-nine infants of this age, thirteen had the *foramen ovale* yet open, although the opening did not exist in the same degree in all; (in four of them its size was large, and in the nine others, moderate;) in six, the obliteration was complete, and in the remaining ten, almost complete. In fifteen of these twenty-nine, the *ductus arteriosus* was found open; in ten of them very freely so, and in the other five the obliteration was very much advanced. In seven, this canal was completely obliterated, while in the remaining seven it was nearly so. In all, the *umbilical vessels* were completely obliterated.

Children of eight days old. In twenty children of this age, the *foramen ovale* was completely closed in eleven; incompletely so in four, and open in five. In three, the *ductus arteriosus* was not obliterated; in six, it was almost entirely obliterated; and in eleven, the obliteration was complete. In fifteen, the *umbilical vessels* were obliterated; the remaining five were not examined.

Children at more advanced ages. In the most of these, the foetal openings are obliterated; nevertheless the *foramen ovale* and the *ductus arteriosus* may be found open as late as twelve or

fifteen days, and even three weeks, without any particular accident happening during its life to the child.*

From these observations, the conclusions may be drawn,—1. That the fœtal openings are not obliterated immediately after birth. 2. That the period at which they are obliterated, is variable. 3. That most commonly the foramen ovale and the ductus arteriosus are obliterated towards the eighth, or the tenth day. 4. That the order in which they are obliterated is the following, viz. the umbilical arteries obliterate first, then the umbilical vein, the ductus venosus, the ductus arteriosus, and finally the foramen ovale. 5. That their obliteration proves that the child was born alive. 6. That it is impossible to infer from the fact of their not being obliterated, that the child has not respired, since it has been shown that the obliteration is very far from being made immediately after birth.†

(d.) *The umbilical cord.* This is the last peculiarity of the fœtal circulation which requires notice. After the birth of the child and the division of it from the placenta, it is well known, that after some days elapse, the cord separates from the child, and drops off. If, therefore, in examining a case, it be found that the cord has separated in the usual way, it is a proof that the child must have enjoyed life. As, however, the separation of the cord takes some days, it is obvious that its presence is no proof that

* In some cases, these openings have remained for a much longer period. Mr. Burns relates the case of a person who lived to the age of between forty and fifty, in whom, on dissection, both the *foramen ovale* and the *ductus arteriosus* were open. The former was equal in size to the barrel of a goose quill, while the latter was equal to that of a crow quill. From the age of three years till his death, he was incessantly harassed with paroxysms of difficult breathing, cough, and discoloration of the skin. These became more and more frequent, and he eventually died of œdema and exhaustion. (Observations on some of the most frequent and important Diseases of the Heart, &c. by Allan Burns, Lecturer on Anatomy and Surgery, p. 17. 1809.)

Corvisart relates the case of a postilion who died at the age of forty-seven, in consequence of local injuries which he received, in whom, on dissection, the *foramen ovale* was found open, and more than an inch in diameter. The ductus arteriosus was transformed into ligament. (An essay on the Organic Diseases and Lesions of the Heart and Great Vessels. By J. N. Corvisart, p. 209. American edition.)

A similar case is quoted by the same author from Morgagni, of a girl who died at the age of seventeen, in whom the foramen ovale was open, and large enough to admit the little finger. (Ibid. p. 229.)

By Dr. Perkins a case is related of a child eleven months old, in whom, on dissection, the foramen ovale and the ductus arteriosus were both found open. (New-York Medical and Physical Journal, vol. 2, p. 444.)

By Dr. R. K. Hoffman, another case is recorded of a child who lived to the age of nine months, and in whom, on dissection, the foramen ovale was found open. (Ibid. vol. 6, p. 250.)

Another case is recorded, in which the foramen ovale was found open in a man who died at the age of sixty. (American Journal of Medical Sciences, vol. 15, p. 223.)

† *Traité des Maladies des Enfants*, &c. par C. M. Billard, pp. 576—80. Also *Leçons de Médecine légale*, par M. Orfila, vol. 1, p. 387. Second edition.

the child was not born alive. As in the case of the foramen ovale and the ductus arteriosus, it has been supposed, however, that the successive changes which the cord undergoes from birth until its final separation, might afford some indication, not merely of the child's having been born alive, but, also of the length of time during which it had lived. M. Billard was the first person by whom these changes were properly investigated. These I shall briefly notice. By the cord here, we mean that portion of it which is between the umbilicus of the child and the ligature. In the new-born infant, the cord is firm, round, and of a bluish color. If the child lives, the first change which it undergoes is that of *withering*. The second is that of *desiccation* or *drying*. The third is the *separation* of it, and lastly, the *cicatrization* of the umbilicus.

Withering of the cord. This is the incipient stage of desiccation, and is indicated by the cord becoming soft, flabby, and very flexible. It takes place at variable periods, from five hours to three days after birth. Of sixteen infants who had the cord withered, one was five hours old, six were a day old, four were two days old, and four were three days old.

Desiccation or drying of the cord. The cord now becomes dry and flattened, and of a brownish red colour. As the process advances, it becomes still more flattened, and assumes a semi-transparent appearance. The umbilical vessels now become contracted and in some cases obliterated. This process usually commences on the first or second day after birth and is completed on the third, fourth, or fifth day. The average period is about the third day. Of twenty-five infants, in whom the desiccation was complete, Billard found one was one day old—one, a day and a half old—five, were two days old—nine, three days old—four, four days old—five, five days old.

By M. Billard, this desiccation is considered as a vital process, and his reasons are, in *the first place*, that the portion of cord beyond the ligature, or that which is attached to the placenta, does not undergo this process of desiccation—but decomposes and putrifies like any other dead matter—while the part of the cord between the ligature and the abdomen alone undergoes desiccation, a process entirely different from ordinary putrefaction. And in *the second place*, that the cord ceases to desiccate as soon as life ceases—that it does not desiccate at all in the fœtus which

is born dead—that on the dead subject the cord undergoes a real putrefaction, which is altogether different from this desiccation.*

The inferences drawn by Billard, from the whole of his observations in relation to the desiccation of the cord are the following :

1. The desiccation of the umbilical cord takes place during life only.

2. At the moment of death this desiccation is completely suspended, or considerably diminished.

3. If the cord be fresh, or commencing to wither, the infant may either have been born dead, or have lived only a short time.

4. If the cord has either commenced desiccating, or be completely desiccated, the infant has lived at least one day.†

Separation or dropping off of the cord. The period at which this takes place after birth, varies very considerably. In sixteen children examined by Billard, in whom the cord had separated, three were two days old ; three, three days old ; six were four days old ; three were five days old ; one, six days old ; and one, seven days old.‡ From the fourth to the fifth day after birth, then, would appear to be the ordinary period at which the cord falls off, although it sometimes happens sooner, and sometimes later. Generally, then, the cord *withers* during the first day, at the end of which *desiccation* commences ; desiccation is complete on the third day, and between the fourth and fifth day the cord *drops off*. All this, of

* *Traité des Maladies des Enfants*, &c. par C. M. Billard, p. 16. New York Medical and Physical Journal, vol. 6, p. 303, 4.

† Billard states that in fetal subjects brought in for the purposes of dissection, he always observed, that they may be kept for several days without any drying of the cord. The cord even remains sufficiently soft and its vessels sufficiently open to permit of their being injected. During life, on the other hand, the cord desiccates and the vessels become obliterated from the first, second or third day. For the purpose of testing these facts, he preserved a number of dead bodies of children for several days. The cord did not desiccate, but remained soft and flexible, even to the fourth and fifth day, and then it fell into a state of putridity. He also succeeded in injecting, by the umbilical cord, at the end of four days, the body of a still-born child. The cord here was not the least desiccated, and was only very soft. (Billard, p. 21.)

When the umbilical cord is left to undergo putrefaction, it becomes greenish white ; after that it puckers at its extremity—the cuticle of the cord is easily separated, although the cord itself does not separate from the abdomen, as it does during life. The cord can be torn in different places, and if it has been in water for some time, it is soft and very fragile. Billard has never seen the cord of a child, born dead, dried up before the fifth or sixth day, and in this case it preserves its circular form and even its suppleness for a considerable time. According to the observations of M. Billard, putrefaction of the cord never occurs, until this process has commenced in other parts of the body. The cord, therefore, is never affected in this way, until the abdominal parietes have turned green, and the different organs are in a state of decided decomposition. (Billard, p. 23, 4.)

‡ Billard, p. 26.

course, is merely general, being liable to numerous variations and exceptions.

Before dismissing the subject of the umbilical cord, there is another phenomenon which requires to be noticed. Anterior to the dropping off of the cord, there is observed *a red or inflammatory circle around its attachment to the umbilicus*; and by many, this has been supposed to be an evidence of vital action, and of course that the child must have been born alive. In relation to this sign, it is to be recollected that it is by no means invariably present. Indeed, according to the observations of Billard, it would seem to be more commonly absent. Out of eighty-six children, he found only twenty-six who exhibited evident traces of this inflammatory circle.* Its absence, therefore, is by no means to be looked upon as an evidence that the child was not born alive.

Cicatrization of the umbilicus. This is the last change which these parts undergo; and the period at which it takes place, is from the tenth to the twelfth day after birth.

Having now gone through the consideration of the vital changes which the circulation undergoes as soon as the child has an independent existence, or in other words, as soon as respiration is established, we are prepared to draw some general inferences from them with the view of estimating their true value.

General inferences, deduced from the examination of the circulation.

1. If the foramen ovale, the ductus arteriosus, the ductus venosus, and the umbilical vessels be obliterated, and, if the umbilical cord be separated, the conclusion is certain, not merely that the child has respired, but, that it has lived for a considerable time.

2. If the foramen ovale, the ductus arteriosus, the ductus venosus, and the umbilical vessels be still open, and if the cord be still attached to the umbilicus, no inference can be drawn that the child has not respired.

3. Of all the changes in the circulating apparatus, consequent upon respiration, those of the ductus arteriosus are the only ones which can be rendered available in cases where the child has only respired for a short period.

4. In cases where a child has respired a sufficient length of time, valuable presumptive evidence of the fact may be obtained from the state of the umbilical cord.

5. The changes in the circulation consequent upon respiration

* Billard, p. 29.

are important in many cases to determine the length of time that a child may have lived after birth.

Having thus considered the various proofs deduced from the circulation, I come next to notice those which are drawn from the respiratory organs.

II. *Proofs of the child having respired, drawn from the respiratory organs.*

The points here to be investigated are the following: *the general configuration and size of the thorax—the situation of the lungs—their volume—their shape—their colour—their consistency or density—their absolute weight—their specific gravity.*

There are three conditions in which the new-born child may be found. It may have respired perfectly. It may have respired imperfectly. It may not have respired at all. It is with reference to these three conditions that the foregoing points are to be examined.

1. *The size and configuration of the thorax.* If the thorax of a child which has never respired be examined, it will be found narrow and flattened. On opening into it, also, the general size of the cavity will be found small, and the diaphragm rising into it highly arched. In a child which has fully respired, on the contrary, the thorax externally will be found broad and rounded, while the internal cavity will be enlarged in all directions. The diaphragm, too, will be much less arched. In cases where the respiration has been less perfect, all these changes will of course be less marked. As the ideas connected with the terms *flat* and *arched*, *small* and *large*, are, in these cases, in a great measure only relative and arbitrary, it was suggested by Daniel, for the purpose of greater accuracy, that the chests of a number of infants should be subjected to measurement, in order to establish a standard of size both before and after respiration. With this view, he proposed that the circumference of the thorax should first be measured by a cord; then the height of it should be taken posteriorly, measuring along the dorsal vertebræ; and finally its depth, by taking the distance from the vertebræ to the sternum. Another mode is, simply to measure the diameter of the thorax from one hypochondrium to the other, and from the sternum to the vertebræ. It must be evident, however, that such measurements must be very uncertain in their results, owing to a great variety of unavoidable causes, such as differences in the

natural size of the child, &c. ; and therefore the inferences drawn from them must inevitably lead, in many cases, to erroneous decisions. It is to be recollected that the thorax of a child is large or small, not so much according to its own actual size, as it is in proportion to the size of the child itself. For instance, in the body of a very small child, the thorax may nevertheless, be justly considered large, although much inferior in size to that of a child much larger. Hence any opinion formed from an examination and comparison of the thorax of different children must be exceedingly doubtful and uncertain. The best way, after all, perhaps, is to trust simply to ocular inspection. A little experience in examining the appearance of different subjects, will much better enable a person to decide correctly, than by any fixed standard of measurement. With regard to the size of the thorax as a sign of respiration or non-respiration, it must be admitted, that taken by itself it is not of much value. It is only in connexion with other signs that it is of importance.

2. *The situation of the lungs.* Anterior to respiration, the lungs occupy a small space at the upper and posterior parts of the thorax, leaving the pericardium and diaphragm almost entirely and sometimes entirely uncovered. If only imperfect respiration has taken place, the lungs will be found occupying the lateral portions of the thorax also. If the respiration has been complete and especially if it has been established for a certain length of time, they will cover almost entirely the pericardium as well as the arch of the diaphragm. Although some three or four cases are recorded by Schmitt,* which tend to weaken somewhat the force of this sign, yet in general, it is one of considerable value. Like the preceding, however, it is not to be depended upon except in connexion with other signs.

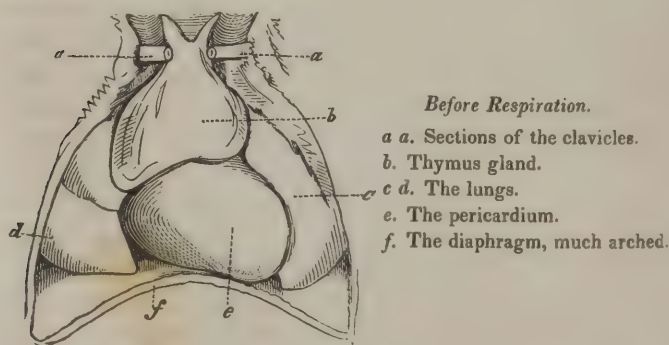
3. *The volume of the lungs.* In the foetal state, the lungs are comparatively small in size. As soon as respiration is established, they become distended with air, and, of course, increased in volume. The degree in which this takes place, must necessarily vary, according as the respiration has been more or less perfect. For the purpose of rendering this test more accurate and available, various modes have been proposed to ascertain the exact increase of volume of the lungs in consequence of respi-

* Dict. des Scien. de Med. art. *docimasia pulmonaire*.

ration. The only one which I shall notice, is that proposed by Daniel.

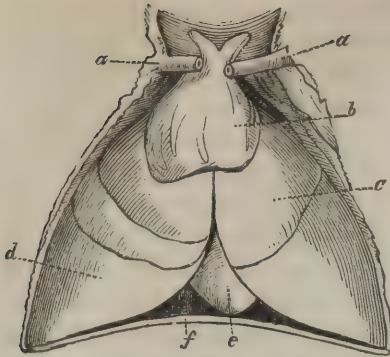
Daniel's mode. This is founded upon the principle, that every solid body plunged into a liquid, displaces as much of that liquid as the space which it occupies. If, then, a solid body be plunged into a vessel of water, it will cause the water to rise in the vessel just in proportion to the quantity which is displaced. It is upon this principle that Daniel proposed that experiments should be made upon lungs that had not respired, as well as those which had respired, for the purpose of ascertaining the different heights to which the water would rise. In the case of lungs which had respired, it is evident that these organs would not sink. To obviate this difficulty, he recommends, that they be placed in a wire basket, the volume of which is known, and which may afterwards be deducted from the volume of the lungs.* With regard to this test, however, it does not appear that any conclusions can be drawn from the *absolute* volume of the lungs which can be depended upon with any degree of certainty. The best mode of judging of the volume of the lungs after all is by the space which they occupy in the chest and by their relative situation to the pericardium and diaphragm.

The following sketches, copied from Dr. Cummin,† will give some idea of the relative situation and volume of the lungs before and after respiration.



* Dict. des Scien. de Med. Western Medical Reporter, vol. 1, p. 322.

† Cummin on Infanticide, p. 56.

*After Respiration.*

- a a. Sections of the clavicles.
- b. Thymus gland.
- c. d. The lungs.
- e. The pericardium.
- f. The diaphragm, less arched.

4. *Shape of the lungs.* In this respect, a striking change takes place in some portions of the lungs in consequence of respiration. In the foetal state, the edges of the lungs are sharp, and the lower margin of the left upper and right middle lobes pointed. After respiration has taken place, the edges of the lungs become rounded, while the pointed margins of the left upper and right middle lobes become obtuse. The degree to which these changes take place, differs also according as the respiration has been more or less perfect.

5. *Colour of the lungs.* In the foetus the colour of the lungs is of a *brownish red*, resembling very much the colour of the liver in the adult and of the thymus gland in the foetus. The resemblance in colour between the foetal lungs and the thymus gland is important, as it furnishes an immediate standard of comparison. After perfect respiration has taken place, the lungs assume a pale red or scarlet colour. Where the respiration has only been imperfect, some portions will be found of a brownish red, while others will be scarlet. In appreciating the value of this test, it is to be recollected that a number of causes, beside the presence or absence of respiration, may modify the colour of the lungs. In the first place, artificial inflation changes the colour of the lungs. The changes produced in the colour of the lungs by artificial inflation, vary with the manner in which the process is performed. If the lungs of a child which has never respired, be taken out of the chest and separated and a small quill introduced into one of the bronchial tubes, these organs can be very easily and fully inflated, and they then assume a uniformly bright red appearance. If, however, air be merely introduced in the ordi-

nary way in which it is practised for the purpose of resuscitating a child, by blowing with the mouth, then the inflation of the lungs is very imperfect, and the change of colour is only partial, corresponding with the parts of the lungs which had been permeated by air. With regard to the exact colour produced by artificial inflation, experimenters differ. According to Bernt, if any change of colour is produced it is only a pale or grayish red.* Devergie says it is white, while Mr. Jennings states that it causes the scarlet tint of respiration. Whichever of these opinions may be nearest the truth, one thing is certain, that the change of colour produced by artificial inflation approximates sufficiently near to that of respiration, to render any distinctions of colour as altogether of little value in discriminating between the two. There is one point, however, of importance in connexion with the colour of the lungs which may be turned to advantage in discriminating between artificial inflation and *perfect* respiration, and that is the *extent* to which the change of colour has gone. As already stated, in cases of artificial inflation, the change of colour is only in portions of the lungs. Where respiration has been perfect, on the other hand, there is a general change of colour in the whole of the lungs. Between artificial inflation and *perfect* respiration, this then would furnish a ground of distinction. Between artificial inflation and *imperfect* respiration, this would be of no avail. In both, the air has only partially pervaded the lungs, and of course the change of colour in both would be only partial. The mere colour of the lungs then would fail to show whether it was owing to imperfect respiration or inflation. Other tests would have to be depended to establish the diagnosis. In the second place, disease may modify the colour of the lungs. Thus, for example, where new-born infants die from sanguineous engorgements of these organs, notwithstanding respiration may have been perfectly established, the colour differs in various degrees from that produced by respiration in healthy lungs. Lastly, the action of the atmosphere upon the lungs changes their colour. On opening the chest of a still-born child, it will be found that the lungs will speedily assume a much brighter colour. From all this it is apparent that observations on the colour of the lungs must be made with great caution, and

* Edinburgh Med. and Surg. Journal.

the necessary discrimination made between the various causes which may have exerted an influence in modifying it.

Like all the other signs of respiration already noticed, the colour of the lungs cannot be depended upon by itself. It must always be taken in connexion with the other signs.

6. *Consistence or density of the lungs.* In the fœtal state, the lungs are dense, resembling very much the solidity of the liver. On pressure, or when cut into, they do not crepitate. After perfect respiration, they become soft and spongy—air bubbles may be squeezed out of them, and when pressed or cut into they give out a crepitus. When the respiration has been less perfect, some portions will be found dense, while others will be spongy and crepitous. This is a valuable and striking test. The only serious objection to it is, that artificial inflation produces precisely the same change in the lungs. The modes of distinguishing between these two will be noticed under the head of the Hydrostatic test.

7. *The absolute weight of the lungs.* From the peculiarity of the vascular system in the fœtus, only a small portion of the blood goes the round of pulmonary circulation, the greater part passing directly through the foramen ovale, and the ductus arteriosus. As soon, however, as respiration is established, all this is changed and then the whole mass of blood passes through the lungs. It is evident, then, that the weight of the lungs must be increased in consequence of respiration, and the increase of weight will be just in proportion to the quantity of blood which has been thus introduced into these organs.

Upon this is founded what is generally known as the *Static test*. To render this test available, it is obvious that some standard weight of the lungs in the two states must be fixed upon, otherwise, no conclusions could safely be drawn in any individual case. For this purpose, two modes have been proposed; the first is, to take the average actual weight of a certain number of lungs, both in the fœtal state and after respiration has been established. The second is, to compare the weight of the lungs with the weight of the body of the child. This last is the test proposed by Ploucquet.

First form of the static test. With regard to the former of these modes, the first great object is to settle what is the greatest weight to which the *fœtal* lungs ever attain. This being es-

tablished, of course, whenever the lungs go beyond this weight, it is evident that respiration has taken place. By Schmitt, the extreme weight of the fœtal lungs, which they never exceed, is fixed at 1170 grains. Professor Bernt supports the observations of Schmitt. In twenty-four cases of still-born children, the greatest weight of the lungs, exclusive of a case of tubercles, was 993 grains; the medium was 550 grains. By Chaussier, it has, however, been established, that the fœtal lungs do occasionally weigh more than this. "Among 104 cases of still-born children, he found the weight of the lungs greater than 1170 grains in five cases; it was 1173 in one, 1282 in a second, 1297 in a third, 1343 in a fourth, and 1637 in a fifth." Now, it has been ascertained, that in a large proportion of cases, the lungs of children which have actually respired, do not weigh as much as is here stated. Out of twenty-five cases of children that had breathed, reported by Schmitt, only four had their lungs weighing more than 1170 grains; out of thirty-seven similar cases by Bernt, only three weighed more. As to the extreme weights from the cases of Chaussier, leaving out of view the last, (1637 grains,) which may be considered as an extraordinary case, and an exception to a general rule, it is very rare that the lungs of a child which has breathed, weigh more than 1343. In thirty-seven cases of this kind, only three had the lungs weighing more.*

From all this it is evident, therefore, that this form of the static test can be applicable only in a very limited number of cases. Where the weight of the lungs exceeds the standard here laid down, it furnishes conclusive evidence of respiration; but as this is not the fact in a large proportion of cases, the evidence deduced from it can only be comparative and presumptive.

As some general standard of comparison, however, 1000 grains may be assumed as the medium weight of lungs which have respired, and 600 grains, of those which have not respired.

Second form of the static test. Ploucquet's test. This test was first announced in 1782, and is founded on the relative weight of the lungs to that of the whole body. From experiments made by M. Ploucquet, he drew the general conclusion, that the weight of the lungs before respiration is one-seventieth of the weight of the whole body; while after respiration has commenced, it

* See, on this subject, an admirable review, written, I presume, by Professor Christison, in the *Edinburg Medical and Surgical Journal*, vol. 26, p. 376.

amounts to one thirty-fifth; or in other words, that the blood introduced into the lungs in consequence of respiration, doubles their absolute weight.

Beautiful as this test certainly is, and correct as the general principle upon which it is founded undoubtedly is, it is exposed to numerous and serious objections.

(a.) There is no fixed proportion between the weight of the lungs and the weight of the body.

An appeal to facts and experiments must, of course, determine the value of this objection. It seems to be conceded on all hands, that M. Ploucquet drew his conclusions from a very limited number of observations. In one child born dead, he found the comparative weight of the lungs to the body to be as 1 to 67; in another, as 1 to 70; in a third which had been born alive, it was found to be as 2 to 70, or as 1 to 35. These were all the observations which he had made, when he promulgated the general conclusion which he drew from them. As might naturally be expected from the novelty and importance of the subject, it has since then attracted the attention of the ablest medical jurists, and their researches have tended very materially to diminish the confidence originally placed in this test. The most extensive observations yet made on this subject, were those conducted by M. Chaussier at Paris, and M. Schmitt at Vienna. The following are some of the results, and they show conclusively that there is no fixed and uniform proportion between the weight of the lungs and the weight of the body.

<i>Experiments on the bodies of infants who had respired.</i>						<i>Experiments on the bodies of infants who had not respired.</i>					
M. Schmitt.			M. Chaussier.			M. Schmitt.			M. Chaussier.		
Weight of the body.	Weight of the lungs.	Proportion between the wt. of the lungs and the body.	Weight of the body.	Weight of the lungs.	Proportion between the wt. of the lungs and the body.	Weight of the body.	Weight of the lungs.	Proportion between the wt. of the lungs and the body.	Weight of the body.	Weight of the lungs.	Proportion between the wt. of the lungs and the body.
Gram.	Gram.	Gram.	Gram.	Gram.	Gram.	Gram.	Gram.	Gram.	Gram.	Gram.	Gram.
1012	35	1 to 29	1025	38	1 to 28	659	18	1 to 36	650	6	1 to 108
1065	31	34	1040	32	34	873	22	39	900	19	48
1091	66	16	1100	25	44	1065	70	16	1051	21	50
1099	35	31	1168	17	43	1361	36	37	1400	60	23
1222	31	39	1224	46	26	1572	39	40	1591	38	42
1257	18	70	1250	41	31	1577	33	47	1625	66	25
1466	28	52	1469	25	59	1915	41	44	1900	52	37
1518	31	48	1520	30	39	2090	35	59	2080	48	43
1863	43	43	1850	43	43	2177	32	67	2200	37	69
1968	22	87	1958	81	63	2221	28	79	2250	87	26
3002	54	37	2000	72	28	2352	54	43	2350	44	54
2160	57	38	2150	60	36	2589	74	34	2570	30	86
2366	46	51	2360	38	62	2648	43	61	2650	47	56
2404	36	66	2400	74	32	2758	35	79	2750	74	37
2491	70	35	2490	97	26	2981	44	67	2950	48	62
2758	87	31	2750	93	29	3102	70	44	3100	57	55
2893	49	59	2900	54	54	3312	61	54	3324	41	81
2908	70	42	3000	113	27	3451	49	70	3350	54	62
3207	61	52	3250	65	50	3502	61	54	3600	50	72
3294	80	41	3300	75	44	3660	57	64	3672	41	90
3731	75	49	3650	105	35	4150	50	83	4161	83	50
4150	105	39	4040	42	96	4185	83	50	4300	106	41
Mean propor. $42\frac{5.28}{113.6}$			39 $\frac{10.9}{122.5}$			Mean propor. $52\frac{80}{103.5}$			49 $\frac{9}{110.5}$ *		

* Dictionnaire des Sciences Medicales, art Docimasia Pulmonaire—and a translation of the same in the Western Quarterly Reporter, No. IV.

(b.) Even admitting that there is a fixed proportion between the weight of the lungs and the body, it is very different from that of M. Ploucquet.

This objection is certainly supported by the observations of Schmitt and Chaussier, as also by those of others. Devergie makes a difference in the proportions between children born at eight and those born at nine months. In the former he makes it as 1 to 63 before respiration; and as 1 to 37 after respiration. In the latter, as 1 to 60 before respiration; and as 1 to 45 after respiration.

The following are the results obtained from observations made by myself.

Ob. 1. In a male child in whom respiration had been complete, the proportion was as 1 to 35.

Ob. 2. In a female child which had respired perfectly the proportion was as 1 to 37.

Ob. 3. In a male child which had respired perfectly as 1 to 44.

Ob. 4. In a male child born alive, but both body and lungs in a state of incipient putrefaction, as 1 to 46.

The first of these corresponds exactly with Ploucquet's test and the second very nearly, while the mean average of the four is as 1 to 40, and if we omit the fourth case, as not in a fit state for any correct inferences, the mean average of the three first is as 1 to 39.

Ob. 5. This was a fœtus which had reached the fifth month, and was judged to have been dead in the uterus about six days before delivery, owing to an accident which had happened to the mother. It was at present in a state of incipient decomposition; the lungs, however, were perfectly sound. The proportion between the weight of the lungs and the body, was 1 to 29.

Ob. 6. A fœtus between the fifth and sixth month, in a state of decomposition—the lungs sound. The proportion here was as 1 to 39 $\frac{5}{7}$.

Ob. 7. In a male foetus between the seventh and eighth month, which had not respired, the proportion was as 1 to 62.

Ob. 8. In a female child born at the eighth month, and which had not respired, the proportion was as 1 to 51.

From the immaturity of the fœtus, in the fifth and sixth observations, they can hardly be considered as fair subjects from which to draw any conclusions. Excluding these, the average of the seventh and eighth, is as 1 to 56.

These cases, then, give the average of 1 to 56 before respiration, and of 1 to 39, after respiration.

The following is the result of these different observations.

	Before respiration.	After respiration.
Ploucquet,	1 to 70	1 to 35
Schmitt,	52	42
Chaussier,	49	39
Devergie,	60	45
My own,	56	39
Mean average,	1 to 57	1 to 40

These, I suspect, will be found nearer the true proportions than those originally announced by Ploucquet.*

(c.) A third objection to this test is, that an excessive conges-

* To those who may wish to investigate this subject still further, I must refer to the 400 experiments detailed in *Considerations Médico-légales sur l'Infanticide*. Par A. Lecieux, p. 44.

tion of blood might occur in the lungs of a fœtus that had never respired, which would render them equal in weight to the lungs of a fœtus which had respired.*

To this M. Ploucquet himself replies, that it is not possible for such a congestion to take place in lungs that have never respired, as shall render their weight equal to that consequent upon respiration; because the foramen ovale and the canalis arteriosus offer so easy a passage to the current of blood, even when flowing with the greatest rapidity, that no determination of consequence can exist towards the pulmonary vessels.

(d.) A fourth objection has been drawn from the alteration produced by putrefaction, in the relative weight of the lungs and body.

On this, Professor Mahon remarks, "that this may be the case if the putrefaction be very great; but then the fœtus cannot be subjected to any examination upon which a medico-legal decision can be founded. But if the putrefaction has not advanced far, as the lungs resist its effects longer than any other part, we may try the application of the proposed test, to corroborate the results afforded by the hydrostatic trials."†

Upon the whole, with regard to the general value of Ploucquet's test, the fair conclusion seems to be, that although the proportions originally announced by its author, have not been borne out by subsequent observations, yet the fact of an *increase of weight* in consequence of respiration is fully established, and by taking the various averages which have been mentioned, important presumptive evidence may be obtained from this source for the corroboration and correction of other tests.

Relative weight of the heart and lungs. From the degree of uncertainty hanging around the test of Ploucquet, Orfila was inclined to believe that a more definite proportion might exist between the weight of the *heart* and the *lungs*, and that this might serve as a test in these cases. He immediately put it to the trial of experiment. For this purpose, he took out the heart and lungs from a number of fœtuses, having previously cut off the venæ cavæ and pulmonary veins, as well as the pulmonary artery and aorta, as near as possible to these organs. He then opened into the heart, to let out all the blood which it contained. After this, having washed them, he weighed them separately. The results were the following:

* Mahon, vol. 2, p. 454.

† Ibid, vol. 2, p. 454.

Age of fœtus.	Duration of respiration.	Weight of the body.	Weight of the heart.		Weight of the lungs.		Proportion between the weight of the heart and lungs.
			Gram.	c.	Gram.	c.	
At full time,	- - -	2280	13.	5	40.	5	3
—	- - -	2000	10.	5	50.		4 $\frac{4}{5}$
—	- - -	2650	19.		50.		2 $\frac{2}{5}$
—	- - -	2700	15.		59.		3 $\frac{1}{2}$ $\frac{4}{5}$
—	- - -	2800	16.	5	87.		5 $\frac{1}{4}$
At eight months,	- - -	1700	9.	5	66.		7
At seven months,	- - -	1450	9.	5	54.	5	5 $\frac{7}{9}$
At six months and a half,	- - -	800	5.		24.	2	5
At full time,	- - -	2305	14.		33.		2 $\frac{2}{5}$
—	- - -	3100	17.	5	38.		2 $\frac{1}{5}$
—	- - -	2200	9.		36.		4
—	- - -	2900	15.	5	29.		1 $\frac{13}{15}$
—	- - -	1750	17.		35.		2 $\frac{1}{17}$
At eight months,	- - -	1840	21.	5	61.		3
At seven months and a half,	- - -	1650	8.		26.		3 $\frac{1}{4}$
At seven months,	- - -	1270	5.		25.	3	5

From these and other similar experiments, Orfila drew the conclusion, that the relative proportion between the weight of the heart and the lungs was too inconstant and uncertain to draw any just inferences as to the fact of respiration having taken place.*

8. *Specific gravity of the lungs.* It is to Galen that we are indebted for the first notice of the fact that the lungs are rendered specifically lighter in consequence of respiration.† The knowledge of this fact was not, however, applied to the purposes of

* Leçons de Médecine Legale, vol. 1, p. 349.

† Opera Galeni de usu Part. lib. xv. cap. 6, p. 145, 6.

forensic medicine until after the lapse of several centuries. Zacchias, who flourished in the beginning of the seventeenth century and who may be styled the father of forensic medicine, passes it over in silence; and it was not until the year 1682, that it was first applied by Schreyer, as a test in cases of child murder.

The Hydrostatic test. The principle upon which this test is founded, is the difference produced in the specific gravity of the lungs, in consequence of the introduction of air into them. In the whole range of medico-legal investigations, there is none more important and at the same time more difficult than that which relates to the validity of this test, as a proof of respiration. From the time of its first promulgation, it has divided the opinions of medical jurists, and even at the present day it still remains a subject of controversy. When it is recollected how great and just an importance has been attached to it in trials for child murder, and how embarrassing to courts and to juries have been the contradictory sentiments advanced concerning it by medical witnesses, the propriety of a full investigation of the subject cannot be questioned.

For the purpose of rendering the discussion of it as distinct as possible, I shall first state the general facts upon which the test is founded, and then consider the various objections to which it is liable.

On putting the lungs of a still-born child into water, it will be found that they sink rapidly to the bottom of the fluid. On the other hand, if the lungs of a child which has breathed perfectly be put into water, they will be found to float high in that fluid. If the breathing has only been imperfect, the lungs will float or sink according as a greater or less portion of these organs has been penetrated by air. On cutting the lungs into pieces, those portions into which air has been introduced will float, while the rest will sink.

From these facts the general conclusions are, that when the lungs float, the child has respired—when they sink, that the child has not respired—when portions of the lungs only float, that the respiration has been partial and imperfect.

Let us now see whether it is safe to trust to the evidence furnished by this test, by considering the different objections which have been urged against it. These may be arranged under two divisions. The *first*, embracing those which go to show that the lungs may float, and yet the child not have respired. The *second*,

embracing those which go to show that the lungs may sink in water, and yet the child have respired.

Objections against the Hydrostatic test, on the ground that the lungs may float, and yet the child not have respired.

Obj. 1. It has been objected that a child may not have respired, and yet the lungs may float in water from having undergone *putrefaction*.

Strange as it may appear, it has nevertheless been a subject much debated, what the effects of putrefaction are upon lungs that have never respired; some asserting, that it renders them specifically heavier than water; while others, of equal respectability, maintain a contrary opinion. Both parties adduce experiments in proof of their particular assertions. The most accurate, I believe, were those performed by Mayer, and as they place this subject in a very just point of view, and relieve it of much of the obscurity in which it has been involved, it may not be improper to present a summary of his observations. From a very extended series of experiments, continued during a number of years, and executed with great care and precision, Mayer found, on putting into water the lungs of still-born children, that they sunk to the bottom. After an interval of two or three days, the water in which they were left became turbid—the lungs changed in colour, and increased in volume—here and there an air bubble arose to the surface of the water, and at the same time a putrid odour became perceptible. All these appearances continued to increase daily, until the sixth, seventh, or, at the latest, the eighth day, when the lungs, both entire and cut into pieces, floated in the water in which they became putrid. On transferring the lungs to vessels containing clean water, they still continued to float, although on the slightest compression they instantly sunk. Lungs placed in water, and exposed to the rays of the sun, swam on the sixth day. If they were suffered to putrefy where there was a free current of air, they rarely floated before the tenth or eleventh day. After the lungs had once floated, they remained in that state, emitting daily a more offensive odour, and acquiring an increased volume, until the twenty-first, or at the latest, the thirty-fifth day. After that period, they gradually sunk down, without a single exception, to the bottom of the vessel, nor did they afterwards betray any disposition to float, although kept

for seven weeks, and in some instances a much greater length of time.*

The foregoing experiments were made in the month of August. The lungs, both entire and cut into sections, were immersed in pure fountain water, and contained in vessels convenient and capacious. In short, every precaution seems to have been scrupulously observed, to render the experiments accurate and satisfactory.

My own experiments on this subject, although not numerous, go to confirm, in every essential point, those which have been detailed.† I will merely state that I found a great difference in the length of time which the lungs took to float, according to the season of the year. In the month of August, exposed to the rays of an intense sun, they floated in less than twenty-four hours; while in the month of April, they took between two and three weeks.

If it should be objected to these experiments that they are not satisfactory, because the lungs were separated from the rest of the body, it will obviate every difficulty to state a case in which the same result was observed in lungs which had not been taken out of the chest, until after they had become putrid. A case of this kind is related in which a child was still-born and had become putrid before it was examined. On dissection, its vessels were found full of air and vesicles distended with air were seen on the surface of the lungs. On putting these organs into water they floated.‡

From the foregoing experiments it thus appears, that in the *incipient* stage of putrefaction, lungs that have never respired will float in water; whereas they will sink if it has continued long enough to completely destroy their organization, and thus extricate all the air contained in them. These results have been corroborated by numerous other observations and experiments.

* Mayer in Schlegel's *Collectio Oposculorum Selectorum ad Medicinam Forensam Spectantium*, vol. 1, p. 262, 3, 4.

† Recently some experiments on this subject have been reported by Prof. Gross, of Cincinnati. In the month of July, he placed the right lung of a still-born infant in an open glass vessel, exposed to the rays of an intensely hot sun. At the end of twenty-four hours it was found to swim on the surface. The whole organ was expanded and offensive, and the surface was covered with air bubbles. At the end of seventy hours it still floated both in the water in which it was originally immersed and in the clear fluid. The left lung taken from the same child was kept for twenty-four hours in a dry glass vessel and then placed in rain water. In twenty-four hours afterwards it floated. See an able review of the *Elements of Med. Jurisprudence* by Prof. Gross in the *Western Journal of Med. and Phys. Sciences* for July, 1836.

‡ *Edinburgh Medical Essays*, v. 6, p. 450.

and their truth cannot be doubted. It seems singular, indeed, that they should ever have been questioned, when a case perfectly analogous is witnessed in every person that is drowned. The body at first sinks; afterwards rises to the surface, when putrefaction has generated air sufficient to render it specifically lighter than water; and finally descends again, upon the extrication of that air.

Such being the effect of putrefaction, it becomes a question of great importance, to determine in what way we may discriminate between the floating of the lungs, as caused by natural respiration, and that which is the result of decomposition.

Independently of the changes produced in the colour and general appearance of the lungs by putrefaction, there are other very characteristic marks by which they may be distinguished.

(a.) By the appearance of air bubbles on the surface of the lungs. On this subject, Dr. William Hunter lays down the following rule: "If the air which is in the lungs be that of respiration, the air bubbles will hardly be visible to the naked eye; but if the air bubbles be large, or if they run in lines along the fissures between the component *lobuli* of the lungs, the air is certainly emphysematous, and not air which had been taken in by breathing."* Jaeger had before this made a similar observation. In lungs floating from putrefaction, he describes the air as contained in the form of bubbles under the external membrane of those organs, where the air introduced by respiration never finds its way.† This distinction is founded in truth, and accordingly has been adopted by the best writers on forensic medicine.

(b.) By the ease with which the air can be extricated from lungs which float in consequence of putrefaction. The evidence of this is to be found in the fact, that if lungs of this description, or any portions of them, be squeezed in the hand, they will immediately sink in water. On the contrary, no compression, however strong, can force out so completely the air from lungs that have respired, as to cause them to sink. This is a test which may be relied on with much certainty.

(c.) By cutting out a portion of the internal part of the lungs and putting this in water, to ascertain whether it will float. If the lungs floated as the result of putrefaction, this internal por-

* On the uncertainty of the signs of murder in the case of bastard children. By William Hunter, M. D., F. R. S. Medical Observations and Inquiries of London, vol. 6, p. 284.

† Jaeger in Schlegel, vol. 5, p. 111.

tion will sink, inasmuch as the air generated by decomposition is confined to the surface of the lungs. If, on the contrary, the lungs have respired, the internal part will float more readily even than that towards the surface.

(d.) By the absence of crepitation in the substance of the lungs, in cases of putrefaction. This is owing to the fact that the air, generated by putrefaction, exists in the external portions of the lungs, and is not found in the air cells, as in natural respiration.

(e.) By an examination of the other viscera of the body. Numerous observations have established the fact, that with the exceptions of the bones, the lungs resist putrefaction longer than any other part of the body. Faissolle and Champeau, in experiments which they made upon drowned animals, observed that the lungs remained sound, after the whole of the body had become putrefied.* Mahon noticed the same fact in his dissections of dead bodies.† Camper ascertained, by direct experiments, that the head became so far decomposed by putrefaction, that the slightest force was sufficient to detach the bones of it from each other, as well as those of the arms and legs, before the lungs began to participate in the putrefaction.‡ I observed the same thing in three instances. This was especially the case in a child found floating in the river. The body had become quite putrid—the scalp was distended with air, and so were the bowels. The lungs, on the contrary, were perfectly natural in their appearance, and untouched by putrefaction. From these facts the conclusion evidently follows, that if the rest of the body of the child which is the subject of examination, be unaffected by putrefaction, it may very confidently be inferred, that the floating of the lungs is not owing to putrefaction.

By a careful application of the foregoing tests, and especially the first and second, little or no difficulty can arise in deciding whether the lungs float from putrefaction or from respiration.

Obj. 2. It is objected that there may be a peculiar *emphysematous condition of the lungs*, which may make them float in water, even though respiration has never taken place.

The fact of such a condition of the lungs sometimes occurring, although noticed previously,§ was first prominently brought

* Mahon, vol. 2, p. 400.

† Ibid.

‡ Dissertation on Infanticide, by W. Hutchinson, M. D. p. 47.

§ Alberti noticed it in 1725, and Schmitt in 1806. (Edinburgh Medical and Surgical Journal, vol. 26, p. 374.)

forward by Chaussier, in some cases where he was obliged, in consequence of the smallness of the pelvis, to deliver by the feet, and where death took place during delivery. The lungs, on being put into water, floated. Chaussier explained this occurrence by supposing that in consequence of the violence done to the lungs during the delivery, an effusion of blood had taken place, the alteration of which had disengaged a quantity of air. Cases of this kind must, as a matter of course, be very rare. When they do occur, the mode of discriminating, according to Chaussier, is by squeezing them in the hand. On putting them into water after this, they will be found to have lost their buoyancy, and will sink precisely like lungs which float in consequence of ordinary putrefaction. In these cases, the aeriform fluid exists only in the cellular tissue.*

Obj. 3. It is objected that a child may not have respired, and yet its lungs may float in water, in consequence of their having been *artificially inflated*.

It has been doubted by some, whether artificial inflation of the lungs can ever be effected. Heister states that he proved, by actual experiments, that air cannot be blown into the lungs so as to cause them to float.† Hebenstreit also doubts whether it can be accomplished, in consequence of the mucus which is usually found to fill the fauces of a new-born child.‡ Roederer, from the failure of his experiments on this subject, was led to the conclusion, that it can only be effected after the child had previously breathed.§ Brendel is still more positive on this point. He believes artificial inflation to be utterly impossible, and assigns two reasons for his scepticism. The first is the resistance which is made by the thorax and diaphragm; and the second is the difficulty of introducing a pipe into the glottis, without which he thinks it is impossible to inflate the lungs. He adds, moreover, in confirmation of his opinion, that he made experiments upon pups that were killed while yet in the uterus; and although he attempted to force in the air by a bellows, yet no change was effected upon the lungs, and they sunk when put into water.||

* *Considerations Médico-légales sur l'Infanticide.* Par A. Lecieux. p. 55, 6.

† Morgagni's Works, vol. I. p. 536.

‡ *Anthropologia Forensis*, etc. p. 405.

§ *Collectio Opusculorum Selectorum ad Medicinam Forensem Spectantium.* Curante Dr. J. C. T. Schlegel. Vol. 5, p. 112. || *Medicina Legalis sive Forensis*, p. 186.

A contrary doctrine is, however, maintained by a very large majority of the most respectable authorities in forensic medicine. Low admits the possibility of it, and tells us that Bohn, together with the medical faculty of Leipsic, concurred in the same opinion.* Ludwig says, it is certain that air may be artificially blown into lungs which have never respired, and that they will afterwards float in water.† In several experiments made to test this matter by the celebrated Camper, the result was uniformly in favour of this opinion.‡ Jaeger, Buttner, and Schmitt, concur in the same, as do most of the French and English writers. Dr. Gooch says he inflated the lungs of a still-born child, and they floated in water as if the child had breathed some days.§ Mr. Jennings,|| as the result of experiments made by himself, states that the lungs may be inflated without the use of instruments, and by simply blowing air into the child's mouth, so that they will float in water—crepitate on pressure, and change their colour from chocolate to bright scarlet.¶

From the foregoing detail of authorities, it is quite evident, that although artificial inflation of the lungs of a child born dead, is a thing perfectly practicable, yet it is not accomplished with as much facility as many have imagined. I am aware that some writers speak with a good deal of certainty in relation to the ease with which this may be practised. It is questionable, however, whether they have not drawn their inferences, in some cases, at least, from insufficient data. If the trachea of a still-born child be opened, and a tube introduced, or if the lungs be separated and a quill be introduced into the bronchial tubes, it is doubtless a very easy matter to inflate the lungs. Any one can make the experiment and satisfy himself perfectly

* *Theatrum Medico-Juridicum*. Cap. 12, p. 623.

† *Institutiones Medicinæ Forensis*, etc. p. 97. † Schlegel, vol. 5, p. 112.

§ *A Practical Compendium of Midwifery*, p. 96. American edition.

|| *Trans. of the Prov. Med. and Surg. Assoc.* vol. 2, p. 440.

¶ Prof. Gross of Cincinnati, who appears to have paid considerable attention to this subject, expresses the following opinion. "We are decidedly of opinion that artificial inflation of the lungs is a very difficult matter; and we believe that the complete distention of these organs can only be affected where a tube is introduced into the mouth of the larynx. A case which recently came under our notice, greatly corroborates this opinion. Here the child was still-born, and in consequence of the delay occasioned by a mal-presentation; and although repeated efforts were made by our friend Dr. E. Read, the attending physician, to resuscitate the infant, yet we found on examination that only a small portion of the right middle lobe, together with a few lobules of the right superior and right inferior lobes were filled with air." *Western Med. Journal*. July, 1836, p. 80.

on this subject. This, however, is a widely different thing from blowing air into the mouth of a child, and that too by persons ignorant of the mode of doing it effectually. If physicians confessedly have failed in accomplishing it, how much more likely is this to happen to persons out of the profession. Indeed it is doubtful, whether inexperienced persons would often succeed in the process. The foregoing considerations I conceive to be important, because they go to show that the cases in which this difficulty may present itself cannot occur so often as some have supposed. There is another circumstance connected with this subject, which is deserving of notice. Although ordinary inflation may introduce a sufficient quantity of air into the lungs to cause them to float, yet the *entire lungs* can never be distended in this way. This was the fact in the case of Mr. Jennings above alluded to, as also in the case of Prof. Gross. If this be so, it would limit the difficulty arising from artificial inflation, to cases in which the lungs are only *imperfectly* permeated by air. Where the lungs are uniformly and perfectly distended, it would at once do away with any objection from this source. Notwithstanding all this, the difficulty would still exist, and it certainly presents the most formidable of all the objections to the hydrostatic test. The difficulty is still further increased by recollecting that artificial inflation not merely causes the lungs to float, but produces other changes analogous to those of respiration. It changes the volume, the colour, the density, and the shape of these organs very much in the same way that vital respiration does. How then are we to distinguish between the effects of respiration and artificial inflation? The following tests will aid in the solution of this difficult problem.

(a.) The first of these is founded upon the difference in the *weight* of the lungs, in the two cases. When vital respiration takes place, it is accompanied by an increased flow of blood to the lungs and a consequent increase of weight. The artificial inflation of lungs which have never respired, is not accompanied with any increased flow of blood to these organs, and therefore there is no increase of weight. Taking the absolute weight of the lungs, therefore, according to Ploucquet's test, or the actual weight of the lungs, is one mode of discriminating between natural respiration and artificial inflation.

(b.) A second test is founded on the fact that the lungs of a

child which has not respired, but which float in consequence of artificial inflation, may, by pressure, have the air expelled from them so as to sink in water; while on the contrary, in a child which has respired, it is impossible by any pressure to force out the air so completely from the lungs as to make them sink in water. This test was originally suggested by M. Beclard, and since then the accuracy of it has been fully supported by other observers, and more especially by Mr. Jennings of England. My own experiments also go to confirm it. In applying this test, certain precautions are necessary to insure success. The pressure must be carried to a suitable extent, or it will fail. The mode adopted by Mr. Jennings, was to put the lungs in a linen cloth, and then wringing them. After this they were placed under a board loaded with weights. If sections of the lungs be made, pressing and squeezing them between the fingers for a certain length of time, will be sufficient to make them sink. In lungs which have respired, no degree of pressure will make them sink. If, however, their texture be completely destroyed by pounding them, they may be made to sink. This, therefore, should be avoided.

(c.) A third test may be deduced from the ductus arteriosus. The value of this test has already been discussed and although not to be infallibly relied on, as corroborative proof it should not be disregarded. If the ductus arteriosus has lost its cylindrical shape and become conical, and if it be diminished in its size, it will be additional proof to show that the air in the lungs is the result of respiration. If, on the other hand, it be cylindrical, and retains its size, it will be in favour of the supposition that the air in the lungs is the result of artificial inflation.

(d.) A fourth test has been suggested by Mr. Marc. He considers that art can never completely inflate the lungs; and from the greater difficulty which attends the admission of air into the *left* lung, he is induced to believe that in cases of artificial inflation the inferior extremity of that lung will float but imperfectly, or not at all.

From what has been already stated, there is every reason to believe, that ordinary artificial inflation can never distend the entire lungs. In cases, therefore, where the lungs are fully pervaded by air, and every portion of them floats in water, this test would be conclusive. In cases on the other hand, where only

a portion of the lungs had been penetrated by air, this test could be of no avail. Now such cases occur continually. In one of the cases reported by Mr. Jennings, the child breathed imperfectly for half an hour and yet the right lung only floated, the left sinking in water, with the exception of a small part about its root.* Indeed it is not positively settled, whether the lungs in any case become immediately filled with air as soon as respiration commences. From the experiments of Mr. Portal long since made, it would at any rate appear that the right lung receives air sooner than the left, and he accounts for this interesting phenomenon, by showing that there is a difference in the size and direction of the bronchi leading to the two lungs. Upon examination, he found the right one about one-fourth part thicker, and one-fifth shorter, than the left; besides, he found the passage to the right to be more direct than that to the left.†

From these facts, therefore, it is evident, that the imperfect distention of the lungs by artificial inflation could be no criterion of distinction in a large number of cases.

Of all the preceding modes of distinguishing between respiration and artificial inflation, the two first are the most to be relied on.

From the preceding examination of objections to the *hydrostatic test*, I think that we may safely come to the following conclusions:

1. That when the lungs *float* in water, it must be from one of four causes: natural respiration—putrefaction—emphysema—the artificial introduction of air.

2. As the lungs may float from other causes besides respiration, their mere floating is no proof that the child has respired.

3. As, however, it is possible to discriminate between the floating of natural respiration, and of that which is the result of other causes, it follows,

4. That, with due precautions, the floating of the lungs may be depended upon as a decided proof that the child has respired.

Objections to the Hydrostatic test, on the ground, that the lungs may sink in water, and yet the child have respired.

Obj. 1. It may be objected that although the child has breathed, yet the lungs, in consequence of disease, may have their specific gravity so increased as to make them sink in water.

* Transactions of the Provincial Medical and Surgical Association, vol. 2, p. 437.

† Duncan's Medical Commentaries, vol. 1, p. 245. American edition.

This objection has been deduced chiefly from analogy. It is a fact well established, that in consequence of various inflammatory and congestive diseases, the lungs of adults may become so morbidly changed as to sink in water, and hence it has been inferred that the same might occur in the new-born child. To render this objection valid, it must be taken for granted that such diseases had already commenced in the fœtus antecedently to birth. Now, although the fœtus may be thus affected, yet the cases in which this occurs must be exceedingly rare, and for the obvious reason that it is not exposed to the influence of the causes which ordinarily produce these diseases. Haller, notwithstanding his great experience and extensive learning, relates no instance of it, and expressly asserts, that they are very rarely found in the fœtal state. "In adulto homine *aliquando*, in fetu *rarissime*, ut pulmo calculis, schirris, aliave materie, morbose gravis in aqua subsideat, etsi quam respiraverit."* Brendel in speaking on this subject, relates only a single case of an abortive fœtus which had schirrous lungs, and considers it a singular occurrence.† Billard, notwithstanding his extensive observations on this subject, relates only three cases of new-born infants, in whom there was reason to suppose that inflammation of the lungs commenced previous to birth.

I shall only add, in confirmation on this point, the opinion of Dr. Duncan, Jr. the accomplished editor of the Edinburgh Medical and Surgical Journal. "Unquestionably, a piece of inflamed lung will sink in water like a piece of liver, *but we doubt that such inflammation was ever observed in the lungs of a new-born infant*, concerning which a question of its having been still-born could arise; and we deny the fact, that any portion of lungs which have breathed, will ever be rendered specifically heavier than water, by the mere settling of the blood in the lower portions after death."‡

Rare, however, as these cases are, it must be admitted that the lungs of new-born infants may occasionally be so congested or diseased, that they will sink in water, notwithstanding respiration may have taken place. In these cases, the modes of determining whether respiration has actually taken place or not are the following :

In the first place, where the lungs are simply engorged with

* Element. Physiologiæ, vol. 3, p. 281. † Medicina Legalis, p. 10.

‡ Edinburgh Medical and Surgical Journal, vol. 12, p. 79, 80.

blood, they may be made to float by depriving them of their superabundance of blood. This may be accomplished by making incisions into the lungs and then subjecting them to pressure, or by leaving them for a certain time immersed in water. In either of these ways they will be made to float. In fœtal lungs, on the contrary, no pressure or immersion in water will ever produce this effect.

In the second place, where actual disease of the lungs has taken place, although these organs, when entire, may sink, yet when divided into a number of pieces, some of them will be found to float. Foderé states, as the result of numerous experiments made upon diseased lungs, that although they sank in water when entire, yet when cut into pieces he invariably found some of the fragments to float.*

Besides the foregoing, there is another circumstance of importance to aid in obviating any difficulty in this case. If the lungs are so diseased as to render them specifically heavier than water, the cause of this will be at once evident on a suitable examination of these organs.

Obj. 2. It has been objected that a child may have actually breathed, but yet so imperfectly, that the lungs shall not have received air sufficient to make them float.

In support of this objection, facts of a very pointed nature have been adduced. Heister relates the case of a very feeble infant, whose lungs sunk in water, though it lived nine hours after birth.† And a late writer on Infanticide states, that he had been informed by a physician to the Foundling Hospital at Naples, who opened daily, on an average, the bodies of ten or twelve infants, which had generally died within twenty-four hours after birth, that he had hardly ever found more than a very small portion of the lungs dilated by air: this portion was frequently not larger than a walnut in its green shell, and but rarely larger than a hen's egg, and it was commonly situated in the right lung.‡

The same method must be here adopted, as in cases where the lungs are diseased; they must be cut into several parts, and experiments instituted upon each. However imperfect the respiration has been, some portion of the lungs will contain air, and

* Foderé, vol. 4, p. 487.

† Morgagni's Works, vol. 1, epist. 19, p. 536.

‡ A Dissertation on Infanticide, in its relations to Physiology and Jurisprudence, by Dr. Hutchinson, M. D. 1820.

this will float. In cases of this kind, additional evidence of respiration may frequently be obtained by the application of the static test, and by examining the state of the ductus arteriosus and of the umbilical cord.

From the foregoing it may, therefore, be concluded,

1. That when the lungs *sink* in water it must be from one or other of the following causes: the total want of respiration—feeble and imperfect respiration—some disease of the lungs, rendering them specifically heavier than the water.

2. As the lungs may sink from other causes than the absence of respiration, their *mere sinking* is no decisive proof that the child has not respired.

3. As, however, the sinking from the want of respiration may be distinguished from that which is the result of other causes, it follows,

4. That with due precautions, the sinking of the lungs is a safe test that the child has not respired.

From the preceding discussion, although it seems that the general conclusion is decidedly in favour of the accuracy of the hydrostatic test, yet nothing can be plainer than the necessity of an extensive acquaintance with the subject, to enable the professional witness to make a just application of it. From what has already been stated, it must be evident that the hydrostatic test does not consist merely in putting the lungs in water to ascertain whether they are specifically lighter or heavier than that fluid. The test thus applied would lead to innumerable errors. On this account, therefore, it is necessary to present a summary of the mode in which it is to be used.

Mode of applying the Hydrostatic test.

(a.) Having opened the chest and noticed the position, colour, volume, &c. of the lungs, they are to be taken out, in the manner to be noticed hereafter, when I come to speak of the mode of conducting dissections. The lungs are then to be specially examined to see if there be any appearance of disease or of putrefaction, or of any thing unnatural about them, and whether they crepitate on pressure.

(b.) A convenient vessel containing water, is now to be provided, and particular attention should be paid to the temperature of the water in which the lungs are to be immersed. The reason of this will be perfectly obvious, when it is recollected that the

specific gravity of water varies with its temperature; thus, for instance, water at 100° is lighter than water at 60° , and still lighter than at 40° . Besides, if the water be too hot, it will have the effect of expanding the lungs, and thus favour their floating, especially when there already exists a tendency to putrefaction. If, on the contrary, its temperature be too low, the air cells may be contracted, and some of the air be thus expelled. The temperature of the water should therefore be regulated by that of the surrounding air. Another precaution relative to the water is, that it should not be impregnated with *salt*; for, in consequence of the greater specific gravity of saline water, a body might float in it which would sink in fresh water.

(c.) The lungs, together with the heart, should then be cautiously placed in water, and it should be observed whether they float or sink: if they float, whether above the surface of the water, or just under it; if they sink, whether they do so rapidly or gradually.

(d.) The lungs should then be taken out of the water, and after tying the pulmonary vessels, they should be separated from the heart and accurately weighed, after this they should be replaced in the water to see whether they sink or float, and in what way. If only one lung floats, observe whether it be the right or the left. The lungs should now be subjected to suitable pressure, to see whether after this they will sink or float.

(e.) Each lung should now be cut into a number of small pieces, and in doing so it should be observed whether there be any crepitation, whether they are gorged with blood, and whether there be any traces of disease. Each section is then to be put into the water. If any or all of them float, they are to be taken out and subjected to proper pressure, and then replaced in the water, to determine whether after this they sink or float.

Having gone through these different processes, the conclusions to be drawn from them are evident. If the lungs, with the heart attached and separated from it, float in water; if, when cut into pieces, each fragment floats; and if this floating be proved not to be owing to putrefaction or artificial inflation, then the proof is strong, that the infant enjoyed perfect respiration. If only the right lung or its pieces float, the respiration has been less perfect. If some pieces of either lung only float, while the greater number sink, it proves respiration to have been still less complete. On

the other hand, if the entire lungs and every section of them sink in water, the inference is, that the child never respired.

III. *Proofs of the child having respired, deduced from the abdominal organs.*

The only organs from which any inferences here can be drawn are the *liver*, the *intestines*, and the *bladder*.

1. *The Liver.* It is a fact well established, that in the mature foetus the liver is much larger than it is after respiration has taken place.* From the changes which occur in the circulating system immediately upon the commencement of respiration, the cause of this must be obvious. In the foetal state, the lungs have but a small quantity of blood circulating through them. As soon, however, as respiration is established, the pulmonary organs become charged with blood. Hence, as already stated, their weight is so greatly increased. Now there is every reason to believe, that this new determination of blood to the lungs is followed by a loss of blood on the part of the liver. In addition to this, the supply of blood to the liver from the umbilical vein is now cut off. From these two causes the quantity of blood going to the liver must be greatly diminished, and hence it is, that this organ gradually diminishes in size after birth. From these facts it appears to me that the relative weight of the liver, may serve as a useful test to establish the fact of respiration having taken place, and more especially to correct any fallacies that might occur from the test of Ploucquet. To exemplify—if by the test of Ploucquet it should be found that the lungs had acquired the weight of a child which had respired, while the liver had lost none of its foetal weight, then there might be ground for suspecting that the increase of weight in the lungs was owing to some other cause than respiration. If, on the other hand, the liver had diminished in weight, while the lungs had increased, this concurrence of the two tests would certainly add greatly to the force and conclusiveness of the testimony.

By no writer on forensic medicine, that has fallen under my examination, has this test been suggested, and I throw it out at

* According to Meckel, the absolute weight and size of the liver diminishes until the end of the first year. In five new-born children he found the liver one quarter heavier than in five other children, from eight to ten months. Doane's Meckel, vol. 30, p. 39.

present, in the hope that it may attract the attention of inquirers on this interesting subject.*

2. *The intestines.* In the foetal state these organs contain a dark pitchy matter, called the meconium, which is evacuated shortly after birth, when the child is born alive. In relation to its precise nature, some difference of opinion has existed. The opinion, however, which seems most plausible, considers it to be the bile collected in the foetal liver, and which is propelled from that organ into the intestinal canal, by the compression which the liver necessarily sustains as soon as respiration commences.†

* This was originally suggested fifteen years ago. Since then, I find this subject has attracted the attention of foreign writers. Professor Bernt, of Vienna, has more especially noticed it; and in his *Centuria Experimentorum*, has in all cases reported the weight of the liver. It does not appear from these reports, however, that any general and satisfactory proportion between the weight of the body and that of the liver, before and after birth, can be established. Orfila has collated some of these cases, and gives the following results :

Dead before or after birth.	Weight of the body.			Weight of the liver.			Proportion between the weight of the liver and body.
	lb.	oz.	dr.	oz.	dr.	gr.	
Still-born, - - - - -	6	2	0	4	0	70	24
do. - - - - -	5	0	0	4	2	46	18
do. - - - - -	5	6	0	5	1	15	19
do. - - - - -	5	13	4	4	3	48	21
do. - - - - -	6	0	0	6	0	60	15½
do. - - - - -	6	2	2½	5	5	70	17
Having scarcely respired, - -	4	12	0	4	0	11	19
do. - - - - -	5	14	4	4	6	24	20
do. - - - - -	5	15	4	5	6	18	16½
do. - - - - -	5	13	4	3	1	52	29
do. - - - - -	4	6	0	3	6	18	19
do. - - - - -	5	7	0	5	0	2	16½
Having respired more, - -	5	4	0	4	2	34	19½
do. - - - - -	5	8	4	4	5	52	18½
Respiration perfectly established,	4	12	4	3	3	60	22
do. - - - - -	5	0	4	8	1	13½	10
do. - - - - -	4	15	0	4	0	11	19½
do. - - - - -	5	13	4	4	3	13	21
do. - - - - -	5	4	0	3	4	33	23½
do. - - - - -	6	8	6	6	2	71	16½
do. - - - - -	7	11	0	9	4	61	13
do. - - - - -	5	10	4	5	6	35	15½

These results, according to Orfila, show conclusively, 1. That the weight of the liver was much more considerable in many infants in whom respiration had been completely established, than in those who were still-born. 2. That the proportion between the weight of the body and that of the liver, was often much less in those cases where respiration had been completely established, than in those who had not respired; which ought to be just the reverse, according to this test. (*Leçons de Médecine Légale*, par M. Orfila. Vol. 1, p. 393-4. Second edition.)

† Bryce on the Foetal Liver. *Edinburgh Medical and Surgical Journal*. Blumenbach's *Physiology*, p. 359, American edition.

The same compression afterwards expels it from the intestinal canal. The connexion, therefore, between respiration and the discharge of the meconium, is perfectly plain. The period at which the meconium is discharged is by no means uniform. In some cases it takes place immediately after birth, while in others it is delayed for several hours. If, therefore, the meconium be found evacuated, it offers a presumption in favour of the child having been born alive, while at the same time it is evident that a child may be born alive, and yet die before it is discharged.

3. *The bladder.* Anterior to birth it has been ascertained that the bladder contains a considerable quantity of urine. At variable periods after birth this is discharged. If, therefore, on examination, it should be found empty, the presumption is in favour of the child having been born alive, and of having lived sufficiently long to pass its urine by its own efforts. It is obvious, however, that this is liable to many exceptions, and should not, therefore, be infallibly relied on. It is not impossible that under certain circumstances, a child may void its urine before birth, and on the other hand, a child born alive, may die before it has performed that function.

General inferences deduced from the preceding examination of the circulation—the respiratory organs—and the abdominal organs.

I. If the ductus arteriosus, the foramen ovale, the ductus venosus, and the umbilical vessels be obliterated, and if the umbilical cord be separated, the conclusion is certain, without any examination of the lungs, not merely that the child respired, but that it has done so for a considerable time.

II. Even should the ductus arteriosus, the foramen ovale, and the ductus venosus be still open and the cord still attached to the umbilicus, the conclusion may be drawn that *the child has respired perfectly*, if the thorax be well arched—if the volume of the lungs be large, filling up the cavity of the chest—if they cover the diaphragm and nearly the whole of the pericardium—if they are soft and spongy—if their colour be bright red or scarlet—if on pressure, or being cut into, they crepitate—if they weigh one thousand grains or upwards—if their weight compared with the weight of the body be as one to forty—if they float in water with the heart attached to them, and when cut into

pieces each fragment floats, and if this floating be proved not to be owing to putrefaction or artificial inflation—and finally, if the meconium be evacuated—if the ductus arteriosus be conical in its shape, or greatly diminished in size.

III. It may be inferred that *the child has only respired imperfectly*, if the lungs only partially cover the diaphragm and the sides of the pericardium—if they present here and there streaks of scarlet intermixed with brownish red, and this especially in the right lung—if the scarlet portions crepitate and the brownish red are dense—if portions only of the lungs float in water, and if this be not owing to putrefaction or artificial inflation, and finally, if the ductus arteriosus has assumed the conical shape. It is scarcely necessary to suggest that where the signs give evidence only of imperfect respiration, the greatest caution should be exercised in making up an opinion. Where the signs are so indistinct as to leave the question doubtful, the medical witness should not hesitate to say so.

IV. If in addition to the signs of respiration, whether perfect or imperfect, as just mentioned (in II. and III.) the umbilical cord be found desiccated, the inference may be drawn that *respiration has been continued at least for several hours, and generally from one to two days*.

V. It may be inferred that the child *has not respired*, if the thorax be flat—if the lungs occupy only the superior and posterior parts of the chest—if they are small in volume, leaving uncovered the diaphragm and the sides of the pericardium—if the diaphragm be much arched—if the texture of the lungs be dense—if their colour be dark brown, resembling that of the liver of the adult—if on pressure, or being cut into, they do not crepitate—if their weight be under six hundred grains—if their weight compared with that of the body be not more than one to fifty-seven—if the entire lungs, as well as every fragment, when cut into pieces, sink rapidly in water, and if this sinking be not owing to engorgement or disease—and finally, if the ductus arteriosus be cylindrical and nearly of the size of the trunk of the pulmonary artery, and if the cord be round and firm.

I have now gone through the consideration of the various proofs of a child having respired, and it is from these that we

infer that a child was born alive. To all this, however, a capital objection remains to be considered. *A child, it is urged, may respire during the birth and yet may die before it is fully born.* In this case the proofs of respiration may be present, and yet the child may not have been born alive. This is undoubtedly a most formidable objection, as its direct tendency is to render all the evidences of respiration invalid as proofs of live birth. It is an objection, too, which may be started in every trial for infanticide. It requires, therefore, to be fully investigated.* The objection may present itself in two different shapes, each of which I shall examine.

1. It may be objected, that "a child will very commonly breathe as soon as its mouth is born, or protruded from its mother; and in that case, may lose its life before it is born, especially when there happens to be a considerable interval of time between what we may call the birth of the child's head, and the protrusion of the body."†

This objection did not originate with Dr. Hunter. It is noticed by Morgagni, and I find it discussed by the German writers early in the last century. It must be admitted, however, that the high authority of Hunter's name has given to it an importance which it otherwise would never have possessed, and it is on this account more especially deserving of examination. It involves two points, each of which is worthy of distinct elucidation. Is it possible that a child can breathe, when nothing more than its head is delivered? and if so, is it probable, that after having respired in this situation, it will die before the delivery of the rest of the body?

Both these must be answered affirmatively to render the objection of any force. The mere fact of a child's breathing in this situation amounts to nothing, unless it be followed by its death. It must both breathe and die before it is born, to make good the objection.

Although it be denied by some very respectable authors, that a

* In previous editions of this work I have considered this objection under the head of the hydrostatic test. As it is, however, as much an objection against almost all the signs of respiration as it is against the hydrostatic test, and as indeed it goes to nullify *respiration* itself, as a proof of live birth, it is more properly to be considered as a distinct question.

† Dr. Wm. Hunter, in the *Medical Obs. and Inq. of London*, vol. 6, p. 287.

child can perform the act of respiration when merely its head is born, yet the fact rests upon evidence too substantial to be contradicted. Independently of the authority of Dr. Hunter, we have several other writers who furnish us with decisive testimony on this subject. Marc alludes to a case of this kind reported by M. Siebold.* Capuron, a respectable French writer on legal medicine,† relates a similar instance which occurred in his own practice. Osiander informs us, that he has witnessed twelve cases in which the child breathed and cried as soon as the head was born.‡ Another case of more recent occurrence is related by Dr. Ward, an American physician. Here, after the head was delivered, the pains ceased, and the child began to cry. In a short time, however, the pains were renewed, and the child delivered alive and without any difficulty.§ By Dr. Scott, of Cupar-Fife, another instance of the same kind is recorded.||

It must therefore be conceded, that a child may breathe and cry as soon as its head is delivered, although it is equally true, that it is by no means a common occurrence. Admitting, then, that a child may actually breathe in the situation we have supposed, is it probable that it will lose its life before the complete expulsion of the body? That it is not, appears to me of very easy demonstration; and if so, the objection loses at once almost all its force. Even among the writers who are most strenuous in support of this objection, I have not met with a single one who pretends to have witnessed an instance in which a child has actually died in this situation. Low, although he thinks it possible, relates no case of it. Dr. Hunter, whose professed object was to enforce all the probable exceptions to the hydrostatic test, gives us nothing more than his opinion, unsupported by facts. Mahon barely admits the possibility of it. Capuron, who is sufficiently sceptical on this subject, contents himself with recording the case already alluded to, in which the child was safely delivered. Even Osiander, with all his extensive experience, does not present us with a single one of this kind. In point of fact, therefore, there is no instance recorded, so far as my knowledge extends, in which a child has actually expired under

* Manuel D'Autopsie Cadaverique, &c. p. 140.

† Capuron, p. 405.

‡ New York Medical and Physical Journal, vol. 1, p. 372.

§ The American Journal of Medical Sciences, vol. 11, p. 546.

|| Edinburgh Medical and Surgical Journal, vol. 26, p. 68.

these circumstances.* This, however, does not prove that it might not occur; and it is therefore necessary to inquire into all the possible causes which might produce its death. If a child expires after the delivery of the head, and before the expulsion of the rest of the body, its death will probably be owing to one or other of the following causes: 1. Natural debility of the child. 2. Pressure on the umbilical cord, interrupting the fœtal circulation. 3. Cessation of labour pains. 4. Unusual shortness of

* Since penning the above, I have received the following note from Dr. Hosack, communicating the particulars of a highly interesting case, in which a child actually died while in this situation.

New York, June 28, 1823.

Dear Sir—You have been correctly informed of the fact you refer to, of the death of an infant taking place between the birth of the head and the extrication of the shoulders. Such a case occurred in my practice in this city, in the year 1811.

Mrs. R—, a lady of a small, delicate frame of body, and the mother of several children, engaged me to attend her in her lying-in. The commencement of her labour proceeded with the usual symptoms that she had experienced upon former occasions, excepting that she suffered more severely from her pains, doubtless attributable to the child being larger than those she had borne in her preceding labours.

Being absent from home when sent for, another physician was called upon. We both arrived nearly at the same time. The child's head was born. It had been in that situation, without making any advance, for some minutes. The child had cried, and was yet living when I arrived. The pains were very active, but one of the shoulders was so firmly wedged above the pubes, that with all our exertions we could not release the child in time to preserve it alive. It was still-born; and I need scarcely add, that upon examining the child, besides its extraordinary size, an unusual breadth of shoulders was found to exist, to which circumstance doubtless detention in the passage through the pelvis was to be ascribed.

This fact, the only one of this nature which I have met with, either in practice or in the records of midwifery, presents a new case for the consideration of writers on legal medicine. As such I communicate it.

I am, very truly, yours,

JOHN B. BECK, M. D.

D. HOSACK.

In addition to the particulars stated by Dr. Hosack, he informed me, that judging from the size of the shoulders, he believes it would have been impossible for the child to have been extricated from its situation, without the aid of manual assistance. In a case of this kind, therefore, no difficulty could ever arise in coming to a correct decision.

Still more recently two other cases of a similar character, are recorded by Dr. Campbell, which I shall give in his own words. "In the one, it was the woman's first child, and was attended by Mr John M'Candie, one of my pupils, now a practitioner in Tain, whom I accompanied, from the labour having been tedious. When the head was born, we both distinctly heard the infant cry. About five or seven minutes might have elapsed before the shoulders were disengaged; and although the infant appeared stout, yet it was still-born, and could not be resuscitated. The second case happened several years afterwards. This woman was the mother of several children, and was attended by Dr. John Clarke, now a medical officer in the army. The infant was large, had several loops of the funis entwined around its neck; and I was present before the head was born, when it began to breathe. In consequence of the size of the shoulders, at least seven minutes elapsed before they could be disengaged, and the child was lost." (Campbell's Midwifery, p. 150.)

It is to be regretted that in all these cases, experiments were not instituted, with the view of ascertaining the state of the lungs, especially as it regards their weight, specific gravity, &c.

the umbilical cord. 5. A preternatural enlargement of the *body* of the child. 6. A tumour upon some part of the body of the child, mechanically interrupting parturition. I shall very briefly examine each of these in their order.

That *natural debility* on the part of the child cannot occasion it, seems to be proved by the very fact of respiration having taken place; for the exercise of that function so prematurely, necessarily implies a degree of vigour inconsistent with the supposition of such original feebleness.

That *pressure on the cord* should produce the death of the child, appears equally improbable. It is perfectly plain, that when this cause proves detrimental, it must be anterior to respiration, and when as yet the life of the child depends wholly upon the fœtal circulation. In the present instance, however, the child is supposed to have already breathed, and therefore any accidental interruption in the fœtal circulation cannot, in all probability, be attended with any injurious consequences.

Cessation of labour pains. If, after the delivery of the head, there be a sudden cessation of the pains, there is no doubt that the child may be retained in this awkward situation for some time, and that it may even lose its life before it is completely expelled. Still it must be obvious, that the chance of such an issue is very much diminished in all those cases where respiration has actually commenced, inasmuch as the performance of this function proves not merely that the child is vigorous, but also that its thorax and body are not so closely compressed by the parts of the mother as to endanger its life. Hence a child, under these circumstances, may be detained a considerable length of time, without jeopardizing its existence.

Unusual shortness of the cord. Cases of this kind occasionally occur. But here too the very fact of respiration having commenced, gives the child the best possible chance of being eventually born alive.

Preternatural enlargement of the body of the child, more especially of the shoulders, may prevent the delivery of the child, even after the birth of the head. That a child might die from this cause, is not disputed; but the very fact of its shoulders and chest being so large as to prevent delivery, shows how difficult it would be for it to respire. If, however, it did actually respire, then the hazard of a long detention in this situation, would, by this very circumstance, be materially diminished. In addi-

tion to all this, the cause would here be so very obvious on a bare inspection of the child, that no serious error could possibly arise from this source.

A tumour on the body of the child. This, of course, must be a very rare occurrence, and can never lead to any false decisions. I mention it merely because a case of this kind is recorded, in which "the head of the child was protruded, and the expulsion of the body for a considerable time prevented, in consequence of a large excrescence on the left breast of the child. During this interval, which was about half an hour, the child frequently cried so loud as to be heard by the attendants."* It does not, however, appear even in this case, that the child eventually lost its life; at least nothing is stated to this effect in the account which is given of it. So far from supporting the objection of Dr. Hunter, which we are considering, it proves, in the most pointed and satisfactory manner, how little danger attends the child in this situation, when it enjoys the benefit of respiration. Besides, it should be recollected, that in all cases where delivery is prevented in consequence of the unnatural size of the parts about the shoulders, &c., the assistance of a physician, or at least of a second person, becomes necessary. A witness, therefore, will always be at hand, to remove every ambiguity which may surround them.

From the foregoing discussion, it may, therefore, fairly be concluded, that in reality very little danger attends the child under the circumstances which we have supposed.

I shall sustain this argument by the opinions of one or two writers, distinguished for their extensive experience, as well as practical sagacity. In a case of this kind, Burns directs that we should "attend to the head, examining that the membranes do not cover the mouth, but that the child be enabled to breathe, should the circulation in the cord be obstructed. *There is no danger in delay*, and rashly pulling away the child is apt to produce flooding, and other dangerous accidents." In another place he says, "some children die, owing to the head being born covered with the membranes, some time before the body. This is the consequence of inattention; for if the membranes be removed from the face, there is *no risk of the child*."† Denman also remarks, that "it was formerly supposed necessary for the prac-

* Mahon's Essay on Infanticide, translated by Christopher Johnson, of Lancaster. See note by Mr. Johnson, p. 25.

† Principles of Midwifery, pp. 246, 376.

itioner to extract the body of the child immediately after the expulsion of the head, lest it should be destroyed by confinement in this untoward position. But experience has not only proved that the child is not, on that account, *in any particular danger, but that it is really safer and better, both for the mother and child, to wait for the return of pains, by which it will soon be expelled; and a more favourable exclusion of the placenta will also, by this means, be obtained.*"*

On a review of the whole of this part of our subject, it results, that a child may occasionally breathe as soon as its head is delivered—that the very fact of its breathing in this situation, gives it the best possible chance of being born alive—and finally, if it should even die, the cause of its death will generally be evident upon a mere examination of the body of the infant.

2. There is another shape in which this objection may present itself, and this is, that a child may respire while yet in the womb, and before it is born may die.

With regard to the occurrence of respiration in a child while yet in the womb and before the rupture of the membranes, the thing seems to me physically impossible, and there is no evidence which can satisfy me that it has ever taken place.† This can-

* Introduction to the Practice of Midwifery, p. 289. See, also, Dewees' Midwifery, p. 194. Merriman's Synopsis, p. 205. Hamilton on female complaints, p. 155.

† Nevertheless cases of this kind are said to have occurred, and have been gravely published to the world. In the 26th vol. of the Transactions of the Royal Society of London, Mr. Derham gives an account of a child who cried almost daily for five weeks before delivery! Another case is detailed in the 73d No. of the Edinburgh Medical and Surgical Journal, by Dr. Zitterland of Strasburgh, in Prussia. In this instance, the child is said to have been rather more civil than in the case of Mr. Derham, and began to cry only forty-eight hours before it was born! The most respectable writers, however, on Medical Jurisprudence, deny the *possibility* of the occurrence and ridicule the instances of it which are upon record. Mahon, for example, asks, whether "the best possible authority is sufficient to establish so extraordinary a fact? Few writers," he adds, "venture to say with Bohn, that they themselves have heard it. Three-fourths quote hearsay, and adduce witnesses. The love of the marvellous often distorts facts—it invents them, and finds authority and proselytes. On the report of a fact attested by credible witnesses, we may give our assent to whatever is not contradictory in itself, but *conviction* is a much greater degree of assent, and requires other proof. Bohn may have been deceived by the parson's wife; he may have heard some gurgling noise, and may have been led away by a want of facts to prove his opinion. This mode of reasoning, and scarcity of facts, has given credit to Livy's history of a child, which cried '*Io triumphe*,' in the belly of its mother. The folly has been carried so far, that we read of children that have laughed and cried in the uterus."—Johnson's Translation of Mahon on Infanticide, p. 18, 19.

Velpeau says, on this subject: "It is sometimes so difficult to avoid all causes of error, all subterfuges, not to be deceived by strange and unexpected noises, such, for example, as are often produced by air in the intestines, that before we admit as positive a phenomenon which it is impossible to reconcile with the laws of physiology, the same person should have ascertained its existence repeatedly; in the mean time,

not be looked upon in the light of an objection that requires any consideration. When, however, the membranes are ruptured—the mouth of the uterus dilated, and the head of the child descends in such way as that the mouth presents so as to offer a ready communication between it and the external atmosphere, then imperfect respiration may take place, and in some cases has actually done so. The following cases, recorded on respectable authority, will illustrate this. The first is related by Prof. Holmes, of Montreal, Canada:—"On the 29th of October, 1828, I was called to a lady in labour of her sixth child. The fontanelle presented, but the pelvis being capacious, and her labours generally easy, no attempt was made to change the position. The head continuing to descend, the mouth lay on the pubis, and the examining finger could easily be introduced into it. The occiput did not yet occupy fully the cavity of the sacrum. At this time I heard sounds like the cries of a child whose mouth was muffled by some covering, but not very distinct, and not being at all prepared for them, I thought when they ceased, that they must have been produced by flatus in the intestines of the mother. In the course of a short time, however, the cries were repeated, and with the greatest distinctness, so as not to admit of a doubt that they proceeded from the child. The mother, much alarmed, in-

I may say with Fontenelle, that, since learned and credible men have heard it, I will believe it, but I should not believe it if I had heard it myself." (*Elementary Treatise on Midwifery*, Meigs' edit. p. 226.)

In connexion with the foregoing, I will only add the following: "A medical practitioner, unable to superintend a lingering case in midwifery under the care of his apprentice, requested a professional friend to give his occasional advice; the latter happening to call, found the young operator in anxious expectation of a second child, one being born some time before. Circumstances, however, occurred to render the operator's opinion somewhat doubtful, but he declared himself quite positive, *because he had heard the second child cry*. After all, *the case ended in the single birth of a child that had been dead some time*." (Johnson's Translation of Mahon on Infanticide, p. 109.)

To those who feel a curiosity in investigating this subject, the following references are furnished:

Johnson's *Medico-Chirurgical Review*, vol. 3, p. 221; vol. 6, p. 532; vol. 9, p. 524. *Edinburgh Medical and Surgical Journal*, vol. 18, p. 550; vol. 30, p. 224; vol. 33, p. 215.

Philadelphia Journal of Medical and Physical Sciences, new series, vol. 4, p. 407. *American Journal of Medical Sciences*, vol. 4, p. 248; vol. 8, p. 248; vol. 11, p. 546; vol. 14, p. 463.

Quarterly Journal of British and Foreign Medicine and Surgery, vol. 4, p. 221. *New York Medical and Physical Journal*, vol. 1, p. 372.

Baltimore Medical and Surgical Journal, edited by Prof. E. Geddings, M. D. vol. 2, p. 445.

Observations on Obstetric Auscultation, &c., by Evory Kennedy, M. D. p. 319.

Intra-Uterine respiration in its relations to Physiology and Medical Jurisprudence. By Prof. Gross, in the *Western Medical Gazette* for July, 1834.

quired the cause of these noises, and required to be assured that they were not indicative of any danger. The pains being brisk, the head was soon forced down and expelled. The child was a female, and is still (August, 1829) alive and thriving. This case appears to me so curious, though easy of explanation, when the position of the mouth is considered, that I am induced to draw up this notice, not having met with any thing similar on record, and as it is entirely different from the incredible stories we have of the fœtus emitting cries before the commencement of labour.”*

Another case, analogous to this, is still more recently related by Mr. Tomkins, an English surgeon, which I shall record in his own language:—“I was, some time since, called to the wife of a blacksmith at Preston, who was in labour with her tenth child. I had attended her in several former confinements, and she had always had quick deliveries, as the pelvis was unusually capacious, and her pains were active. After I had been a few minutes in the room, I proposed and made an examination, and found the face presenting, and making its descent into the pelvis, the chin resting on the os pubis. A few strong pains succeeded, and I again examined to ascertain if the face had made any advance. I found it had done so, and that it was pressing on the perineum; but in making this examination, my finger passed freely into the mouth of the child, and it immediately gave a convulsive sob, and cried aloud to the great terror of the mother and of the bystanders, when they found that it was still in the womb. I had great difficulty in calming the agitation produced by this event upon the woman, whose pains were suspended for nearly an hour, but I eventually succeeded by explaining that the face was presenting, and that from the circumstance of my having passed my finger into the mouth, the air had gained admission and enabled the child to breathe; this, with a little spirit and water, and a dose of the ergot of rye, succeeded in bringing on the uterine action, and after two pains, the child was expelled alive and well, at least one hour after it had respired and cried in the womb.”†

Now, in reply to the difficulties created by these cases, the following considerations may be urged:

In the first place, such cases must be exceedingly rare. Face

* Edinburgh Medical and Surgical Journal, vol. 33, p. 215.

† Lancet for July, 1834.

presentations do not occur frequently. Out of 16,980 children born at the Hospital of Maternity at Paris, only 59, or 1 in 300, were of this nature.* Even when such presentations do happen, the occurrence of respiration anterior to delivery can take place only under very peculiar circumstances. In the two cases detailed above, it will be observed, that respiration occurred *only in consequence of the introduction of the finger of the accoucheur into the child's mouth.*

In the second place, even supposing respiration to take place, it must be very imperfect, unless the child continued to breathe after it was delivered, in which case, the objection would, of course, fall to the ground.

In the last place, if full and complete respiration took place under these circumstances, (a case hardly supposable, however,) this fact would indicate, most clearly, that the passages of the mother were so capacious as to offer no impediment to a prompt and safe delivery; and therefore no question of a criminal nature could ever be raised.†

From all that has been said, therefore, in relation to the foregoing objection, in whatever shape it may present itself, I think we may fairly make the following inferences.

* Edinburgh Medical and Surgical Journal, vol. 19, p. 469.

† I cannot take leave of this point, without presenting the following view taken of it by one of the highest authorities on every question relating to Juridical Medicine—I mean the Edinburgh Medical and Surgical Journal.

"*Uterine* respiration can never come in our way on such trials, (for infanticide,) for it takes place only under circumstances which render manual aid necessary to complete the delivery. *Vaginal* respiration is also so far similarly circumstanced. Respiration in the passages, as hitherto observed, takes place only, 1, in delivery by the feet, when the whole body but the head is protruded; and 2, in natural delivery, either when the head is expelled and the body remains in the passages; or 3, when, before the expulsion of the head, and after the rupture of the membranes, the hand is introduced to accelerate tedious labour. The first case cannot occur in medico-legal practice, so far as regards infanticide and concealment of pregnancy. The second can hardly be a cause of fallacy, as the circumstance of the child being able to breathe, shows that the constriction of the chest cannot be great; that the labour must therefore be speedily completed, and that the child's life is secured against the ordinary accidents which occur after this period of the labour. The third case renders it perhaps possible, that in tedious labour, air may reach the child in the passages, and be inhaled by other means besides the introduction of the hand; at the same time, such cases are by no means likely to occur in legal medicine, as the labour must be tedious, and consequently is not easily concealed. It appears, therefore, that the possibility of respiration before the close of labour, forms an objection to the employment of the hydrostatic test, only so far as it may occur in tedious natural labour. Now, independently of respiration being exceedingly rare in such circumstances, the objection thus constituted is important only *by preventing the inspector from relying on the test in particular and known circumstances*, not by being apt to lead him into error: because the fact of the labour having been tedious, may always be ascertained by moral evidence. This objection, therefore, is not of much consequence." (Edinburgh Medical and Surgical Journal, vol. 26, p. 372.)

1. That respiration anterior to full birth is a rare occurrence.
2. That when it does take place, it must be under circumstances which give the child the best possible chance of being born alive.
3. That when a child dies in this situation, the respiration must necessarily be *imperfect*, and therefore it can create no difficulty in cases, where the evidences of *perfect* respiration are present.
4. That when a child dies in this situation, the respiration must, as a matter of course, be of *short duration*, and therefore it can present no difficulty in cases where, from the appearance of the umbilical cord, it is evident that respiration has been continued for some time.

Thus narrowed down, the objection can only present itself, therefore, legitimately in cases where the respiration has been imperfect and of short duration. To the naked difficulty then presented in all such cases I would make the following reply. Let it be recollected that the objection takes it for granted that respiration has already taken place. Now, if a child which had breathed, should die before it is fully born, no charge of infanticide could ever be sustained unless it were proved at the same time, that it died by violent means. No criminal charge could be based on the mere fact of respiration or even full birth having taken place. On the other hand, if it be proved that a child which had breathed, has come to its end by violent means, the mere question as to whether this violence was committed *before* or *after it was fully born*, ought to make no difference in the character of the crime or the nature of the punishment. If, for example, a child's head was merely born, and it had breathed, and while in this state, a knife was thrust into the fontanelle and its life thus taken away before it was fully born, it appears to me that neither common sense nor justice could set up, as at all exculpatory, the distinction between respiration and live birth. The fact of respiration proves that the child was *alive* at the time, while the injury inflicted on the brain proves that it was murdered. The very conditions of the objection, therefore, appear to me to do away with its force, in its application to cases of infanticide, and this of course is the only connexion in which in the present case it is to be viewed.

I have dwelt the more fully upon this objection, because it presents a real difficulty in all trials for infanticide, and because some writers have, in my opinion, given it an undue importance

by the strenuous manner in which they have insisted upon the distinction between respiration and live birth. Pushed to the full extent to which it is urged, it would in every case, defeat the ends of justice and nullify every investigation in cases of alleged infanticide.

Quest. III. *If born alive, how long had the child lived?*

This inquiry is important, inasmuch, as it enables us to ascertain how it compares with the signs of delivery in the reputed mother. For example, if it should be ascertained that the child had lived short of a day, and yet the appearances on the female indicated that her delivery had taken place several days previously, it would show at once that she could not be the mother. In the determination of this question, no information of any importance can be obtained from the respiratory organs. These merely prove that the child breathed and lived, but *how long* it did so, they do not indicate. To establish this point we have to depend mainly upon the proofs derived from the circulation, and this shows the importance of the preceding detailed investigation of these proofs. The principal points to be examined are the following :

- (a.) The state of the foramen ovale.
- (b.) The state of the ductus arteriosus.
- (c.) The state of the ductus venosus.
- (d.) The state of the umbilical vessels.
- (e.) The state of the umbilical cord.

Of all these, the most satisfactory information will be obtained from the state of the umbilical cord.

Quest. IV. *By what means did the child come to its death?*

Like the causes of abortion these may be divided into two classes, viz :

- I. Criminal.
- II. Accidental.

As in every case of alleged infanticide, a question may be raised as to whether the death was owing to the one or the other of these sets of causes, it becomes necessary to examine them separately and in detail.

- I. *Criminal modes resorted to for the destruction of a newborn child.*

1. *The intentional neglect of tying the umbilical cord.* The majority of medical practitioners, from the time of Hippocrates

down to the present day, concur in the necessity of tying the cord, to obviate fatal hæmorrhage which might ensue from the omission of it. Such was the unanimity of opinion on this subject, that previous to the 17th century a doubt was not entertained with regard to it. According to Foderé,* *J. Fantoni*, professor of anatomy at Turin, was the first who suggested that this precaution was useless, and that the neglect of it was unattended with any danger to the life of the child. After his time the same opinion was adopted and defended by *Michael Alberti*, in 1731, and *J. H. Schultzius*,† in 1733, both professors in the university of Halle. In 1751, *Kaltsmidt* maintained the same doctrine at Jena.‡ The arguments offered by them in defence of their opinion are the following; 1. They maintain that the umbilical vessels, whether cut or torn, have a sufficient contractile power to prevent any great loss of blood. 2. That because, in other animals it is not necessary to tie the cord, therefore it is equally useless in the human species. 3. *Kaltsmidt* adduces an argument from the analogy of arteries contracting spontaneously in some surgical operations, and he thence infers, that a similar contraction would take place in the vessels of the cord.§

Let us examine these arguments for a moment. With regard to the *first*, it is obvious that it is nothing more than a reiteration of the subject in dispute, with the addition of an attempt to explain the reason of it. To say that the vessels of the umbilical cord contract sufficiently to prevent fatal hæmorrhage, is, in fact, to say nothing more nor less than that such hæmorrhage does not take place. It offers neither fact nor argument in relation to the disputed point. This, therefore, requires no examination.

The *second* argument is drawn from analogy. To render it therefore available, the analogy between the human cord and the cord in animals must be complete. This, however, is not the case. That there is some difference in the structure of the human cord and that of other animals, is not merely a rational conjecture, but proved by actual observation. Prof. Brendel, in examining pups and heifers, found their umbilical vessels full of rugæ or folds throughout the whole of their course, and their size

* Foderé, vol. 4, p. 502.

† In a dissertation entitled, "An Umbilici deligatio in nuper natis absolute necessaria sit." Halle, 1733.

‡ Foderé, vol. 4, p. 509.

§ Mahon, vol. 2, p. 422, &c.

much less also in proportion.* From this it appears, that in brutes there is a peculiar construction of the vessels of the cord, tending to interrupt the flow of blood through them, and favouring their speedy contraction. Besides, the manner in which the cord is separated in brutes, facilitates contraction. It is never *cut* in them; it is *torn asunder*, and the disposition of a vessel to contract under such circumstances is greatly increased.

The *third* has still less force than the foregoing. That arteries of inconsiderable magnitude frequently contract spontaneously, is granted; but that vessels of a size equal to that of the umbilical ones, do generally contract of themselves, cannot be admitted, when we know that very dangerous hæmorrhages sometimes occur from vessels even much smaller than those of the cord.

After all, the whole question rests upon a simple matter of fact, and this fact is, whether the omission of the ligature upon the cord has ever been attended with fatal hæmorrhage. That it has been so, cannot be questioned. Among others, a very striking case is recorded by Foderé, which he was called upon by the authorities to examine. An illegitimate child, immediately after its birth, had been carried about three leagues to a woman who was to perform the office of nurse. Finding it very feeble, the nurse, on examination, ascertained that it was covered with blood, and that the ligature around the cord was quite loose. The child died shortly after. On examination, Foderé reports that he found the body extremely pale: without any sign of violence or wound; the umbilical cord flaccid; the lungs floated perfectly, not only alone, but with the heart attached—when cut into pieces, too, every piece floated; the heart completely empty, as also the large vessels, the vena portæ, the ductus venosus, the umbilical vessels, and even the capillary system of vessels. On weighing the blood found in the child, he found that it did not amount to two ounces. From all this, he concluded very justly that the child had enjoyed perfect life, and had died from umbilical hæmorrhage.†

Dr. Campbell states that he met with two cases in which infants were destroyed, one by the accidental, and the other by the intentional, removal of the ligature from the cord.‡

* *Medicina Legalis sive forensis*, p. 9.

† *Traité de Médecine Légale*, etc. Par F. E. Foderé. Vol. 4, pp. 515—16.

‡ *Introduction to the Study and Practice of Midwifery*, p. 151.

The following case is recorded by Dr. Hutchinson ; although the life of the child was saved, it shows conclusively the great danger attending hæmorrhage from the cord. "The navel-string of a living infant was tied in the usual way ; but by accident, the funis separated very close to the ligature. Two hours afterwards, the practitioner was sent for ; and on his arrival, he found the infant on the point of dying from hæmorrhage that had just occurred from the navel-string. The infant had been washed and dressed in the usual way, and had not cried after it had been placed in bed with the mother ; soon after which, the hæmorrhage was discovered. The child was fortunately preserved, by very assiduous subsequent care."*

Although there can be no question, therefore, that fatal hæmorrhage may, and has occurred, from not tying the umbilical cord, yet it is equally certain that it does not necessarily do so. Observations, to a great extent, have been made, which prove that this precaution has been omitted, without any serious consequences resulting. It is stated that M. Klein has reported one hundred and eighty-three cases of sudden labours, in many of which the cord was ruptured, and in twenty-one cases, close to the abdomen, yet there was no fatal umbilical hæmorrhage.† In no case, therefore, is the mere absence of the ligature to be taken as conclusive evidence of death by hæmorrhage.

Signs of death by hæmorrhage from the cord. These are the following :

(a.) Paleness of the surface, with a peculiar waxy appearance.

(b.) Paleness and loss of colour in the muscles and internal viscera.

(c.) The absence of the usual quantity of blood in the heart and blood-vessels. By some it is stated, that in cases of hæmorrhage, the heart and blood-vessels are completely empty. This, however, is not the case. Generally speaking, "if three ounces of blood can be collected, it may be presumed that the child has not died of hæmorrhage."‡

(d.) The absence of any wound or injury on the body of the

* A Dissertation on Infanticide, &c. By William Hutchinson, M. D. p. 87.

† A Manual of Medical Jurisprudence, by M. Ryan, M. D. p. 144. Griffith's ed.

‡ Cyclopædia of Practical Medicine, vol. 2, p. 694.

child, to account for the loss of blood in any other way than by hæmorrhage of the cord.

2. *Exposing a new-born child to the action of cold.* It is needless to dwell upon the necessity of those precautions which are generally resorted to after the birth of a child, in order to preserve a proper degree of temperature. They are founded equally upon experience and good sense. If, therefore, they have been neglected in any case, it is just to attribute it to *design*, unless circumstances render it probable that it proceeded from ignorance or want of the proper means. In either case, however, the physician may be called upon to decide, whether the death is to be attributed to the action of the cold, or to some other cause.

Signs of death by exposure to cold. These are given by Foderé in the following terms: "If the body of an infant be found stiff, discoloured, shrivelled, and naked, or with only a slight covering on it in a cold place—buried under stones, or under the earth—and from trials upon the lungs, it is evident that it has respired; and if the great internal vessels are found gorged with blood, accompanied with an effusion of blood into the cavities, whilst the cutaneous vessels are contracted and almost empty, and when no other cause of death can be detected, one cannot do less than attribute it to the cold, and consider this abandonment and neglect of care, the necessity of which is obvious to the dullest comprehension, as a manifest intention to make away with the child."*

3. *Keeping from the child the nourishment necessary for supporting life.* It is not easy to say how long a new-born child may sustain life without food. It is evident, however, that it ought not to be delayed for any length of time. It is generally agreed that the neglect of it for twenty-four hours, is not unattended with danger. In these cases, the child is generally found exposed in some deserted place.

Signs of death from the want of food. As death in these cases does not take place until the child enjoyed life for a certain length of time, the first thing to be established, is that the child has lived long enough to die from this cause. This may be done by inspecting the foramen ovale, the ductus arteriosus, the

* Foderé, vol. 4, p. 505.

ductus venosus, but more especially the umbilical cord, according to the signs laid down in a previous part of this essay.

As children who die from want of food are generally exposed also, they sink under the combined operation of exposure and want of nourishment. They will be found, accordingly, to present the same appearances as in the last case; and besides these, there will be general emaciation of the body, and on dissection, the stomach and intestines will be found empty, the gall-bladder will be enlarged, and bile found generally effused in the stomach and intestines.*

4. *The infliction of wounds and injuries of various kinds.* This is among the most common of the modes by which the life of a new-born child is wilfully destroyed. Death in these cases may be produced in various ways, some of which I shall notice.

The introduction of sharp pointed instruments into different parts of the body. Gui-Patin relates of a midwife who was executed at Paris for having murdered several children, by plunging a needle into the head while presenting at the os externum.† Brendel also speaks of the same horrible practice. An instance of this kind is related by Belloc, where, upon examination, he found the instrument had penetrated to the depth of two inches into the substance of the brain.‡ Needles, or other sharp instruments, are sometimes thrust into other parts of the child, such as the temples, the internal canthus of the eyes,§ the spinal marrow, the neck, the thorax about the region of the heart,|| and the abdomen. Sometimes a sharp instrument has been run down the throat, and up into the rectum. A case is recorded in a recent journal, in which the child was evidently destroyed in this way.¶

Signs. In all cases where death has been produced in the preceding ways, dissection alone can reveal the cause. Where the instrument has been run into the brain, the head must be shaved, when a slight ecchymosis will be perceived around the puncture; after this, the examination must be pursued into the substance of

* Besides keeping food from the new-born child, its life may be endangered and destroyed by giving it improper food. Dr. Campbell states that he has known several illegitimate children destroyed by giving them to be nursed by women whose milk was twelve or fourteen months old, the parties concerned being well aware that the children could not long subsist on such nourishment. (Midwifery, p. 151.)

† Mahon, vol. 2, p. 409.

‡ Cours de Med. Leg. p. 93.

§ Prælect. Academ. J. G. Brendel, ii. p. 168.

|| Foderé, vol. 4, p. 492.

¶ Case of Elliot and Bease. Edinburgh Medical and Surgical Journal, vol. 35. p. 457.

the brain, to ascertain the nature and extent of the injury. Indeed this is the only way in which injuries of this kind can be distinguished from tumours and extravasations on the scalp, which may occur during ordinary delivery, and be wholly unconnected with any malicious intent. In punctures of other parts of the body, the same course must be pursued. The wound must be probed, and the dissection prosecuted to see how the internal organs are injured.

Wounds and bruises. This is another mode frequently resorted to for destroying the new-born infant. They may be found on any part of the body; the more common part, however, is the head. For the purpose of ascertaining the effects upon the head of a child falling from different heights, the following very instructive experiments were made at the Lying-in Hospital, and are detailed by Lecieux :

“Fifteen infants who had died after their birth, but in whom there was no alteration in the bones of the cranium, were selected, and after having been raised up by the feet so that the head was at the height of about eighteen inches, were suffered to fall perpendicularly upon a hard floor; and by anatomical examination, it was found that in twelve of them there was a longitudinal or angular fracture of one of the parietal bones, and sometimes of both.

“In the same manner fifteen infants were suffered to fall from a height of three feet, and on dissection there was found, in twelve cases, a fracture of the parietal bones, in some extending to the os frontis. When suffered to fall from a greater height, the membranous commissures of the cranium were relaxed, and even broken in some places; frequently the form of the brain was changed, and in some cases there was found under the meninges, or in the thick part of the meninges, an ecchymosis, an extravasation of blood produced by the rupture of vessels; and it was only in infants whose bones were very soft and flexible, that no fracture was found.

“After having placed on a table the head of a child that had died soon after its birth, it was pressed in different places very strongly by the two thumbs on different parts of the surface; and in fifteen experiments of this kind, seven caused longitudinal fractures of greater or less extent in one or other of the parietals; in others, there was only perceived a depression or sinking of the

bones. In the greatest number, the head was deformed or flattened, and the membranous commissures exhibited a sensible relaxation.

“Finally, the head, supported on a table, was struck strongly, and in different places, with a short, round stick. This experiment always caused a deformity or flattening of the head, multiplied fractures, with separation of splinters, relaxation, in some places rupture of the sutures, and finally extravasation of blood.”*

Signs. In cases of wounds, the points to be determined are, whether the wounds were inflicted before or after the death of the child, whether they are necessarily mortal, and whether they may not have been the result of accidental and unavoidable circumstances. With regard to wounds of the head, it is to be recollected that the heads of children are not unfrequently tumefied and ecchymosed from compression, during a difficult and tedious labour. In some cases, too, a peculiar sanguineous tumour forms spontaneously on the head of the new-born child.† Arising in this way, these tumours are not attended with any danger to the child, and they are never complicated with fracture of the cranium. In some rare cases, even fissures of the cranium have occurred during delivery. This can occur, however, only under very extraordinary circumstances. In one case recorded by Siebold, a female with a very narrow pelvis was delivered, by the efforts of nature alone, of a well sized female child. It manifested no signs of life. On examination, the head was found swelled, and a great quantity of blood was extravasated upon the surface of the cranium. In the left parietal bone three fissures were discovered, and a fourth in the left frontal bone. In this case, these extensive injuries were manifestly owing to the long continued pressure of the head of the child in a narrow pelvis.‡ Another case of a similar character, is reported by Michaelis of Kiel. A woman with a well formed pelvis, was delivered of her first child, after an ordinary natural labour. The child breathed both during birth and immediately after, but then died. The head was much disfigured, and on examination, the right parietal bone, which during birth had been directed

* *Considerations sur l'Infanticide, par Lecieux.*

† See an excellent paper on this subject by Prof. Geddings, the able and learned editor of the *North American Archives of Medical and Surgical Science*, v. 2, p. 217.

‡ *North American Archives, &c.*, vol. 2, p. 434.

under the promontory of the sacrum, was found covered anteriorly and above with effused blood, and on the removal of the periostium, was found fractured in five places. The whole of this bone was *uncommonly thin*. On opening the skull there was found no extravasation beneath the fissures, but posteriorly the longitudinal sinus was ruptured, and there was an extensive coagulum on the cerebrum on both sides, under the dura mater, and on the tentorium cerebelli. In this case, the injuries were attributed to the natural weakness of the bone, and to the unfavourable position of the head during birth.* These cases, extraordinary as they are, are yet sufficient to show with what caution opinions should be formed, in relation to injuries of the head in new-born children.

In all examinations of contusions, two cautions ought to be observed; viz. to distinguish them from the discoloured spots which appear on the surface of the body at the commencement of putrefaction, and, not to confound accidents which may occur during dissection, with those resulting from blows and other acts of violence.

Luxation and fracture of the neck. This is a mode of infanticide sometimes resorted to, and is usually perpetrated by forcibly twisting the head of the child, or pulling it backwards.† In such cases, the vertebræ are fractured, the ligaments ruptured, and death is caused by the injury inflicted upon the spinal marrow.

Signs. The mode of identifying this kind of death, is by the local derangements about the part—by the position of the head—and, on dissection, by the fracture of the first or second vertebra, or both, and by the extravasation of blood among the cervical muscles. This last circumstance will show, that the violence has been committed on a living subject.

5. *Asphyxiating a new-born child, or putting a stop to its respiration.* This may be accomplished in various ways: by drowning, hanging or strangulation, smothering under bed-clothes, suffocating, by thrusting various articles into the mouth and nostrils; finally, by exposure to noxious airs.

Drowning. If a child be found immersed in water, the questions which require to be determined are the following. In the first place, was the child born alive. In the second place, sup-

* American Journal of Med. Sciences, vol. 21, p. 246. † Mahon, vol. 2, p. 409.

posing it to have been born alive, was it put into the water before or after its death. The first of these is to be determined by the means already indicated. With regard to the signs of drowning, they are the same in the infant that they are in the adult, and a careful examination is therefore to be made, with the view of ascertaining whether these are present or not.*

Hanging and strangulation. In hanging, the general cause of death is precisely the same as that in drowning, viz. suspension of the respiration. The signs, therefore, in the two cases are the same, except so far as they are modified in the former, by the application of the ligature and the absence of water. In cases of death by hanging, accordingly, there will probably be a circular livid mark around the neck from the application of the ligature.†

Death by *strangulation* is produced by the same general cause as hanging, and the only difference between them, will be the absence of the distinct circular mark round the neck in the former, and the presence of ecchymoses and discolorations about the neck and chest, produced by the application of fingers and nails to these parts.

In cases where death by hanging or strangulation is suspected, there is one source of fallacy which requires to be specially noticed. It happens sometimes, though rarely, that in consequence of the cord being wound round the neck, the child dies during or immediately after birth. Whether in cases of this kind, the same kind of mark is left on the neck of the child as in criminal strangulation, is a question concerning which there is much difference of opinion. Klein states, as the result of extensive experience, that he has never met with an instance, in which ecchymoses or any other marks have been produced by the cord. On the other hand, Taufflieb has recorded some cases, in which these appearances were actually observed.‡ In all cases of supposed hanging or strangulation, this should be made the subject of special investigation.

Smothering. When the child has been *smothered* under bed-clothes, &c. the circumstances upon which to form a decision

* On the signs of Drowning, see CHAPTER XIV.

† On the signs of Hanging, see CHAPTER XIV.

‡ Annales d'Hygiène publique, v. 14, p. 340.

that wilful murder has been committed, besides those which characterize strangulation generally, are, the place where the body is found, and the absence of any other probable cause to which its death can be attributed.

Introducing articles into the mouth, nostrils, or throat. When this is the case, dissection alone can detect the cause.

Causing a child to inhale air deprived of its oxygen. This takes place when a living child is shut up in a tight box or coffin. The oxygen of the air contained in the box is gradually consumed, until the air becomes irrespirable.*

In cases of this kind, experiments upon the lungs will show whether the child was born alive or not. If born alive, the absence of any other cause of death, and the suspicious and unnatural circumstances attending the place where the child may be found, will sometimes lead to a judgment in the case.

The inhalation of gases positively deleterious. The gas yielded by privies and sewers is sulphuretted hydrogen, and in the smallest quantity, and even when diluted with atmospheric air, proves very speedily destructive of life. When new-born infants are thrown into these places, they are destroyed partly by the action of the gas, and partly by ordinary suffocation.

6. *Poisoning.* Poisons may be introduced into the system in various ways. They may be inhaled into the lungs, in the form of odours; or they may be taken into the stomach, mixed with food; or they may be received in the form of injections, or be absorbed through the skin.

When the poisonous substance has been taken into the stomach and intestines, it should be carefully examined, and subjected to the various tests which chemistry supplies for detecting its presence. In cases where the cutaneous absorbents have been the medium of conveying it into the system, it may be very difficult, generally, to discover the cause of death. In some instances,

* On this subject, Dr. Paris makes the following statement. "Infants appear to be less able to sustain the deprivation of oxygen than adults, and in some cases on record, life has been destroyed by circumstances that we should have *a priori* considered as hardly adequate to such an effect. A case is related of a child who was suffocated by some drunken men having repeatedly blown out a candle, and held the smoking wick under its nose. The faculty of Leipsic investigated the circumstances, and declared the death to have taken place in consequence of suffocation." (Medical Jurisprudence. By Paris and Fonblanque, vol. 2, p. 55.)

an eruption on the skin, and the peculiar odour of the substance which has been employed, aided by the circumstantial evidence, may lead to a discovery.

II. *Accidental modes in which a child's life may be lost.*

Having thus considered the various criminal modes resorted to for the purpose of destroying the life of the new-born infant, I come now to notice the various causes which may destroy it, without any criminal agency. Under this head, there are three different classes of causes, which require notice—

1. Accidental circumstances connected with delivery.
2. Various malformations, inconsistent with the continuance of life after birth.
3. Various diseases which may have commenced anterior to, or immediately after birth.

1. *Various causes connected with delivery, which may occasion the death of a new-born child, without any criminal intention.*

A new-born child may sometimes lose its life, from its not being removed from that state of supination, in which it sometimes comes into the world. In this way respiration may be effectually prevented, by the mouth of the child being closely applied to the bed-clothes, or other substances in its way. Dr. W. Hunter relates an instance of a child dying, from its face lying in a pool made by the uterine discharges, where not the least suspicion of any evil design appears to have been attached to the mother.* A case in some respects similar, occurred to myself. A female, whom I had engaged to attend in her lying-in, was suddenly taken with labour pains, rather before the time the event was anticipated. I was sent for shortly after, but before I reached the house, she had been delivered of a male child, which I found lying dead under the bed-clothes. The mother informed me that the child had been born about half an hour, and that she had heard it cry, but as she was alone, she had been unable to give it any assistance. Not the slightest suspicion of any criminal intention could for a single moment be cherished. The female was

* Observations on the uncertainty of the signs of murder in the case of bastard children. (Medical Observations and Inquiries, of London, vol. 6.)

married, and had engaged me to attend her some weeks before the event took place.

A new-born child may lose its life from the suddenness and rapidity of the labour. Dr. Hunter relates a case, where a female was seized during the night, and the child was born before he arrived. She held herself in one posture, to prevent the child from being stifled; but although it had cried, yet on the arrival of Dr. Hunter it was found dead.* A case is recorded by Mr. Tatham, where a patient in her fourth pregnancy, after three trifling pains, was passing along the lobby to her bed-room, when the infant was suddenly thrown on the floor, bleeding profusely at the umbilicus, but ultimately recovered.† Another case is related by the same authority, of a female, who, in the last month of her first pregnancy, while the family were absent, was obliged to go to the night-chair—a great discharge of water took place, followed by twin children, which dropped into the utensil; from which, however, they were speedily rescued, but died within a week.‡ Besides this, the labour may be attended with faintings or convulsions of the mother, so as to render her incompetent to offer any assistance to the child.

With regard to the fact of the death of the child occurring from the mere rapidity and suddenness of the labour, it must be exceedingly rare, and under very peculiar circumstances; and when it does occur, it must be either from the child being suffocated by falling into a privy at the time of delivery, or by the injury which it receives from falling in cases where a female happens to be delivered while standing. The first of these is, no doubt, possible, and probably has occurred.§ From the experiments of Chaussier, detailed in a previous page, we

* Medical Observations and Inquiries, of London, vol. 6, p. 286.

† Medical Repository, for April, 1829.

‡ Campbell's Midwifery, p. 155.

§ Dr. John Gordon Smith relates, that "a woman was tried at the Old Bailey for the murder of her child, by dropping it into a privy. She declared, that while there for a natural purpose, an uncommon pain took her, the child fell, and she sat sometime before she was able to stir. On this occasion, a practitioner was examined on the probability of such an event, who stated that an instance came within his knowledge, where, while the midwife was playing at cards in the room, the woman was taken suddenly and the child dropped on the floor." Dr. Smith adds, "it recently happened in the circle of my own acquaintance, that a lady who had borne several children, and must therefore have been alive to the import of uneasiness in the last hours of pregnancy, was sitting in company at dinner, and perfectly free from any consciousness of approaching labour, when she experienced an inclination to repair to the water-closet. She had scarcely got there when she was delivered of a child. Had the place of retirement been constructed differently," adds Dr. S. "this infant might have perished." (Principles of Forensic Medicine, p. 381-2.)

should be led to infer, that children born while the female is in the standing posture, would be seriously injured by the fall. The cases, however, are by no means analogous, and experience has proved that under these circumstances, there is really very little risk to the child. This point is fully established by the report of Dr. Klein of Stutgardt. As a member of the superior council of health, he caused a circular to be addressed to the accoucheurs of the kingdom of Wirtemberg, requesting reports of the cases of sudden expulsion of the fœtus, which might be observed by them. Returns were made of one hundred and eighty-three cases. Of these, one hundred and fifty-five children were expelled while the mothers were in the upright posture, twenty-two when sitting, and six when on the knees. Twenty-one happened at the first labour. Of the whole number not one child died; no fracture of the bones took place, nor any severe injury. Two only suffered temporary insensibility, and one an external wound with ecchymosis over the right parietal bone.*

An interesting case in which this question was involved, occurred in the State of Massachusetts in 1834. Margaret Croslan, an unmarried coloured girl, aged 22, was indicted for murdering her infant illegitimate child, and concealing its death. On the trial, it was proved, that the body was that of a full grown male child. There were no external marks of violence, excepting signs of effused fluid under the scalp covering the frontal bones. "Blood was found in considerable quantity, partly fluid, and partly coagulated. The pericranium was separated from the bone, and the parietal bones were both fractured, the left one in three places, the right in one." The chest was opened, and portions of each lung were cut off, and on being put into water floated. This appears to have been all the examination that was made. By the prosecution, it was argued, that the child was born alive, and came to its death by intentional violence applied to the head. For the defence, it was contended, that the prisoner had been taken suddenly in labour in the yard; that the child was delivered while the woman was in a standing position; and that the injury of the head was caused by its falling on the ground, which was hard and frozen. The jury brought in a verdict of acquittal.†

* Arrowsmith in the *Cyclopædia of Practical Medicine*, vol. 2, p. 693.

† A full and able account of this case is given by Charles A. Lee, M. D. *Amer. Jour. of Med. Sciences*, v. 17, p. 327.

In reviewing this case, I cannot help thinking that the prisoner owed her acquittal more to the ingenuity of her counsel, than to the justice of her cause.

Accidental hæmorrhage from the umbilical cord. I have already spoken of neglecting to tie the cord with a criminal intent. It should be recollected that although it has been resorted to with the latter object in view, yet in many, perhaps in most cases, it may be the result of ignorance. It should not be forgotten, too, that this is most likely to occur in those very cases which become the subject of judicial inquiry, inasmuch as in these, the female, for obvious reasons, is frequently shut out from the benefit of professional assistance. Besides this, hæmorrhage from the umbilical cord, may occur under a variety of other circumstances, purely accidental. Sometimes, it may occur accidentally, from a proper ligature not being applied to the cord. Dr. Hosack states, that he once delivered a woman of a very strong and large child, the cord of which he tied with common tape, as that was the only material at hand. He had scarcely reached his home before he was sent for again, and on returning, found that the ligature had given way, and a dangerous hæmorrhage had ensued.* Mr. Burns states also, that it has "sometimes been found, that when the ligature had become slack, a considerable quantity of blood was lost, and even fatal hæmorrhage has taken place."† Sometimes the cord is very thick, in consequence of a very large quantity of glutinous matter being contained in it. When this is the case, the ordinary ligatures will not be able to prevent bleeding. After the cord is divided, it becomes lessened in size, and the ligature which at first was tight, will now be found loose, and the mouths of the umbilical vessels open. Mr. Radford, who has noticed this especially, relates a case of this kind, in which he was called to an infant who was bleeding, about three hours after birth. The skin was pallid, and the pulse scarcely perceptible. On examination, the ligature was loose, and the orifices widely gaping.‡ Another case of this kind is related by Burns.§ Sometimes the cord will be found ossified, or in a state of cartilaginous hardness. In these cases, there is always more or less danger of hæmorrhage from the inability of applying the ligature properly.

* MSS. Lectures.

† Midwifery, p. 565.

‡ Edinburgh Medical and Surgical Journal, vol. 38, p. 2.

§ Midwifery, p. 200, American edition.

A case of this kind, is related by Mr. Logan, in which the cord gave way several times, from pressure of the ligature and from pulling on it during the expulsion of the placenta.* Dr. Dewees relates another case, in which a dangerous hæmorrhage took place in a child three days old, and which on examination, was found to be owing to a varicose state of the cord. In consequence of which, he lays down a general rule, never to apply a ligature above a varicose portion of the cord, if it be possible to apply one below.†

There is another accident, too, which sometimes happens, in which hæmorrhage may occur; and that is, where the child is suddenly expelled, and the cord ruptured, when no immediate assistance is at hand. Mr. Custance relates a case of protracted labour, where the child was suddenly expelled *on the bed*, with such violence as to rupture it very near the body. Although there was no hæmorrhage, it died in a few hours.‡ Another case is related by Mr. Chamberlayne, in which the cord broke off, (just in the right place too,) in consequence of the violent expulsion of the child.§ In cases of this kind, however, where the cord is torn off, it is to be recollected that hæmorrhage is not so likely to occur as when it is cut.

A child may die from prematurely tying the umbilical cord. We know that the circulation by the cord and respiration, are vicarious functions, and if the former be arrested before the latter is in operation, life must cease. It is accordingly laid down as a rule by practical writers, that the cord should never be tied or divided, until respiration has been established.

That the neglect of this important rule of practice is an occasional cause of death to the new-born infant, in the hands of ignorant midwives and practitioners, does not admit of a doubt. Dr. Dewees states, that he has seen “several instances of death, and this of a painful and protracted kind, from the premature application of the ligature.”|| By Dr. Eberle a case is recorded, which illustrates the evil effects of premature tying of the cord. The

* Edinburgh Medical and Surgical Journal, vol. 37, p. 276.

† A Treatise on the Physical and Medical Treatment of Children, by Wm. P. Dewees, M. D. &c. p. 331.

‡ Lancet, vol. 5, p. 120-1.

§ London Medical and Surgical Journal, vol. 7, p. 284.

|| A Treatise on the Physical and Medical Treatment of Children, by W. P. Dewees, M. D. p. 260.

child breathed freely as soon as it was born. After waiting three or four minutes, until the cord pulsated feebly, it was tied. As soon as the ligature was drawn, the breathing became catching, irregular, and in a few moments almost wholly suspended, and the lips acquired a deep livid hue. The cord was immediately divided below the ligature, but only a few drops of blood could be obtained from it, and it was only with the greatest difficulty that the action of the heart and lungs were re-established.* Dr. Campbell records a similar case, in which the application of the ligature was followed by breathlessness and lividity of countenance. The child was relieved by the application of two leeches to the region of the heart.†

2. *Congenital malformations of certain organs.*

These are by no means uncommon, and as they might be found in cases which become the subjects of judicial investigation, and give rise to doubts as to the cause of death, it is necessary to show to what extent they may interfere with the continuance of life in the new-born infant. The subject is one of great interest as well as extent, and all I can hope to do, is to give a general outline of it. Observation has shown, that almost every organ and part of the human body is liable to some malformation or imperfection. It is evident, however, that they cannot all be equally dangerous, or hostile to the prolongation of life. In these respects they must differ greatly according to the degree in which they exist, and more especially according to the importance of the organ in which they are found.

Malformations of the heart and vascular system. Of these the following have been observed and recorded.

A congenital opening between the two ventricles. Several instances of this kind are on record. Dr. Hunter relates the case of a still-born child at six months, who had a hole in the septum of the two ventricles, large enough to allow a goose quill to pass through it.‡ Another similar case is related by Dr. Pulteney. In this instance, the person lived to nearly fourteen years of age.§

Corvisart gives the case of a child twelve years old, in whom, on dissection, there was found an aperture in the septum of the

* A Treatise on the Diseases and Physical Education of Children, by John Eberle, M. D. p. 86. Second edition.

† Midwifery, p. 152.

‡ Baillie's Morbid Anatomy, p. 24. Medical Observations, vol. 6.

§ Medical Transactions, vol. 3.

ventricles, large enough to admit the extremity of the little finger. From the appearance of the aperture, there was good reason for believing that it was congenital.*

Dr. Hunter relates the case of a patient who reached his thirteenth year, in whom, on dissection, the pulmonary artery was found very small, and an opening of the size of the thumb led from the right into the left ventricle. This patient had been in ill health since his birth—had been subject to fits from his earliest years, during which his complexion became of a dusky hue. He died in one of these paroxysms.†

Where the heart consists only of one auricle and one ventricle. This is a rare malformation. Mr. Burns says there is only one case on record, and that is by Mr. Wilson. This was in a child who died seven days old, and whose body was brought to the Theatre of Windmill Street for dissection. In this case there was one vessel which originated from the ventricle and divided into two branches—the one to the lungs, and the other to the rest of the body.‡

Another case, however, is recorded by Billard. This child lived fifteen days. During this period it was affected with cyanose—had frequent syncope and fits of threatened suffocation, in one of which it died.§ This malformation would seem to be inconsistent with the long continuance of life.

Where the aorta arises from both ventricles. Corvisart gives a case from Sandifort, in which the subject died at the age of twelve years. During this period, it had from its second year been attacked with all the symptoms denoting disease of the heart, of which it died. On dissection, it was found, that beside the existence of the foramen ovale and dilatation of the right ventricle, the aorta, instead of rising from the left ventricle only, had a mouth in each of the ventricles.||

In two cases recorded by Mr. Burns, the persons led a most miserable life, and were subject on every trivial exertion to those paroxysms which are produced by a mixture of venous and arterial blood. At last they died dropsical.¶

* Corvisart, p. 207; also, p. 229.

† Observations on some of the most frequent and important diseases of the heart.

&c. By Allan Burns, p. 20. Baillie, p. 23.

‡ Ibid. p. 27.

§ Traité des Maladies des Enfants, &c. Par C. M. Billard, p. 701. 2d edition.

|| Corvisart, p. 231-2. American edition.

¶ Burns' Observations, p. 13.

Another case is recorded by Dr. Ray, of Eastport, in the state of Maine. The child lived to the age of thirteen months. During the first five months of its life, nothing peculiar was perceived about it but a slight blueness of the ends of the fingers, the eyelids, root of the nose and mouth—after this it suffered occasional paroxysms, resembling severe colic, attended with a dry suffocative cough. In the intervals of the paroxysms, the child appeared to be perfectly well. On dissection, the ascending aorta and arch was found dilated to four times the capacity of the descending portion. The foramen ovale was open, and both ventricles communicated with the aorta, the aorta being placed astride the two ventricles. The ductus arteriosus was also open, and terminating in a cul de sac in the wall of the left ventricle—no pulmonary artery could be discovered.*

Where the pulmonary artery is impervious at its origin. This is by no means common. A case, however, is related by Dr. Hunter, which terminated fatally on the thirteenth day.†

Malformations of the respiratory organs. These, although not very common, are sometimes met with. Cases are recorded in which the thoracic parietes have been so deficient and imperfect, as to leave the heart and lungs naked. Under such circumstances, it is evident that life cannot long be protracted. In some cases, the thorax may be distorted in such way as to interfere greatly with the due expansion of the lungs, and of course with the proper performance of the function of respiration. It is clear, however, that this may exist to a very considerable extent, and yet life be continued for a number of years.

Where a congenital deficiency exists in the *diaphragm*, so as to admit the passage of some portion of the abdominal viscera into the cavity of the thorax, the danger is more impending, and it is hardly possible that life can be long continued.

Malformations of the alimentary canal. These have been observed in every portion of this tract, from the mouth to the anus. The mouth has sometimes been found wanting, or obliterated; in other cases, there has been an absence of the œsophagus. An instance of this kind is reported by Dr. Sonderland. The child at birth was apparently well formed, but rejected every thing that was introduced into its mouth in the way of nourishment.

* The Medical Magazine, conducted by A. L. Pierson, J. B. Flint, and E. Bartlett. Boston, vol. 2, p. 317.

† Burns' Observations, etc. p. 25.

It died on the eighth day. On dissection the cardiac orifice of the stomach was found wanting, and this part of the stomach was adhering to the diaphragm. The œsophagus was entirely wanting, and the pharynx terminated in a cul de sac.*

The *stomach* is subject to malformations as regards shape and displacements. These, however, do not interfere with the continuance of life, provided the orifices of this organ be free.

Malformations of the *intestinal canal* are numerous and various. Those which are particularly worthy of notice in this connexion, are those in which the canal is obliterated, or interrupted, or contracted. Dr. Schæfer relates the case of a child, which died on the seventh day after birth. On dissection, the *duodenum* was found terminating in a cul de sac, and a complete interruption thus existed in the intestinal canal. This child, during its life, had passed neither meconium nor urine, and vomited matter of a liquid brown character.† Another case, of a similar character, is reported by Billard. In this case, the child died on the third day. It had not passed any meconium, and had vomited freely a yellowish fluid.‡

The most common of these malformations, however, are those of the *rectum*. In some cases, there is simply a contraction and closure of the anus; in other cases, the rectum itself is partly deficient, and terminates in a cul de sac; while in others again, the rectum terminates in the bladder, or in the vagina.§ Now, in all these cases, the life of the child must be lost inevitably in a very few days, unless the difficulty can be relieved by an operation.

3. *Various diseases, which may be either congenital, or occur immediately after birth.*

This is the last class of accidental causes to which the death of a new-born infant may be owing.

Morbus cæruleus. Cyanosis. This is commonly known by the name of the *blue disease*, from the peculiar colour of the skin which characterizes this affection. The part more particularly affected, is the face. During crying or any other effort on the part of the child, the colour becomes much deeper. Besides the

* Billard, p. 285.

† Ibid. p. 363.

Ibid. p. 364.

§ Billard, pp. 367, 370. Baillie's *Morb. Anat.* p. 114. Campbell's *Mid.* p. 571.

peculiar colour of the skin, the symptoms are, disordered circulation, disturbed respiration, and diminished temperature of the whole body. Now and then the symptoms are all aggravated, and the patient is attacked with the most distressing paroxysms of laborious breathing, fainting, palpitation, and suffocation. It is during these paroxysms that life is generally in danger, and frequently is lost. Concerning the causes of this curious affection, there is some difference of opinion. Formerly it was supposed to be invariably owing to the foramen ovale remaining open. This, however, is not the case, inasmuch as it has been found to be associated with a number of malformations of the heart and large blood-vessels.*

From what has been already stated in relation to these malformations, it is easy to appreciate the kind of danger to which a new-born infant is subject, in whom they may be found to exist. While in some cases death may take place in a few hours or days after birth, in others again existence has been protracted for many years. As, however, life is always in danger in these cases, the just and certainly humane conclusion in a case of alleged infanticide, and where this disease might be urged as the cause of death, would be to admit that it might be so, provided said malformations were actually found on dissection, and provided no other cause of death could be detected.

Organic diseases of the heart and blood-vessels. By Billard, a case is recorded of a child, who, from birth, was affected with frequent syncope, difficult breathing, discoloration of the nostrils and lips, and disordered circulation. It died, after suffering in this way about two months. On dissection, the heart was found almost as large as a hen's egg, with dilatation of the right auricle and ventricle.†

Another curious and unique case is recorded by the same author, of a child who had an *aneurism of the ductus arteriosus*. It died on the fourth day, and betrayed no symptoms during life of the existence of this aneurism. It was about the size of a cherry pit.‡

Pericarditis. By Billard, this disease is supposed to be more common in new-born infants, than at any other period of life.

* For a condensed, but excellent view of this subject, see a *Dictionary of Practical Medicine*, by James Copland, M. D. vol. 1, p. 199. American edition.

† Billard, p. 589.

‡ Billard, p. 591.

In seven hundred autopsic examinations which he made at the Foundling Hospital of Paris, he found seven well marked cases of pericarditis; two of these were in children who died on the second day after birth. In one, an infant of two days old, he found the adhesions of the pericardium so solid as to lead to the belief that the disease was of long standing, and must have commenced while the fœtus was still in utero.*

Pneumonia and pleuritis. There is every reason to believe that these affections, though rare, may sometimes exist in the fœtal state. Billard states, that in three infants who died on the first day after birth, he found the texture of the lungs so altered, as to lead to the belief that disease must have commenced antecedent to birth. In two cases, the left lung was hepatized at its base.† In these cases, there was no doubt that this condition of the lungs interfered with the establishment of respiration, and was the cause of death.

Inflammation of the *larynx* has not been observed as occurring in the fœtal state. Billard, however, states that he has frequently observed in fœtuses born before the time, a congestion of blood about these parts. The mucous membrane of the larynx and trachea was of a violet colour, and at the same time there was an extravasation of blood extending even into the bronchiæ. He presumes there must have been in these cases a great determination of blood to those parts in the last moments of intra-uterine life, or during the act of delivery.‡

With regard to affections of the lungs, it is also to be recollected, that infants are occasionally liable to be attacked with many of them immediately after birth, and they may prove fatal in a few days. In all cases of this kind, however, the appearances on dissection will throw light upon the cause of death.

Diseases of the alimentary canal. Billard states that in two cases in which new-born infants died a short time after birth, he found ulceration in the œsophagus, which from their appearance must have been developed during intra-uterine life, and which, from the progress they made after birth, must have hastened their death.§

The same author relates cases in which there was every rea-

* Billard, p. 595, 703.

† Ibid. p. 521.

‡ Ibid. p. 494.

§ Ibid. p. 687.

son to believe that *inflammation of the stomach* existed previous to birth, and was the cause of death after birth.*

Ramollissement of the intestines has also been noticed by Billard, in children who have died a short time after birth.†

Of the examination of the mother.

Having gone through with the examination of the child, and having ascertained that it was born alive, and that its death was owing to violence, we are next to inquire into the relations of it, with the supposed mother. As already stated, the questions here to be investigated are the following.

Quest. I. *Has the woman been actually delivered?* The signs of delivery have already been discussed in a previous part of this essay.

Quest. II. *Do the signs of delivery in the mother correspond as to time, &c., with the appearance of the child?*

By comparing the observations made upon the child, with the signs observed on the female, a rational opinion can easily be formed, whether any incongruity exists between them, and the inference of course is obvious.

Circumstantial evidence. Although this does not strictly appertain to a medical discussion of the subject, yet there are some points embraced under it, concerning which the testimony of the physician may be required.

1. It may be urged in excuse for a woman on a trial for child murder, that from the uncertainty of the signs of pregnancy, she may have been ignorant of her actual condition, and therefore may have been suddenly overtaken with the pains of labour, when it was out of her power to command assistance, and thus the child have lost its life. To all this, a very plain and concise reply may be made. However difficult it may be for a physician to say positively, whether a woman is pregnant or not, yet we can scarcely suppose the woman herself to entertain much doubt on the subject, especially in a first pregnancy, which it almost always is in cases of infanticide. If she has yielded to the solicitations of a seducer, and if she afterwards experiences those changes and developements in her system, which accompany a state of impregnation, she cannot but be conscious of her

* Billard, p. 311, 689.

† Ibid. p. 691.

true situation, and therefore, any arguments drawn from this source ought to have no weight.

2. It may be urged in the defence of a female accused of destroying her child, that she may have been labouring under puerperal mania; in other words that she was insane. A case of this kind appears actually to have occurred, and is related by Dr. Paris. "In the year 1668, at Aylesbury, a married woman of good reputation being delivered of a child, and not having slept many nights, fell into a temporary phrensy, and killed her infant in the absence of any company; but company coming in, she told them she had killed her infant, and *there* it lay; she was brought to jail presently, and after some sleep she recovered her understanding, but marvelled how or why she came thither. She was indicted for murder, and upon her trial the whole matter appearing, it was left to the jury with this direction, that if it did appear that she had any use of reason when she did it, they were to find her guilty; but if they found her under a phrensy, though by reason of her late delivery and want of sleep, they should acquit her; that had there been any occasion to move her to this fact, as to hide her shame, which is ordinarily the case of such as are delivered of bastard children and destroy them; or if there had been jealousy of the husband that the child had been none of his; or if she had hid the infant, or denied the fact, these had been evidences that the phrensy had been counterfeit. But none of these appearing, and the honesty and virtuous deportment of the woman in her health being known to the jury, and many circumstances of insanity appearing, the jury found her not guilty, to the satisfaction of all who heard it."* On this case Dr. Paris justly remarks, "had this woman been of doubtful character, though innocent, she might have been executed for want of medical evidence to prove the nature and frequency of puerperal insanity."†

Of the method of conducting examinations in cases of infanticide.

In every case of infanticide, so much depends upon the testimony furnished by the physician, that it becomes a sacred duty on his part to investigate, with the utmost fidelity and impartiality, every circumstance which may aid him in coming to a satisfactory

* 1 Hale's Pleas of the Crown, p. 36.

† Paris and Fonblanque's Medical Jurisprudence, vol. 3, p. 129-30.

and enlightened decision. The labour of such investigation is doubtless great and unpleasant ; but unless submitted to by the professional witness, he certainly cannot be considered as qualified to give his evidence in a case which involves the life of a fellow being.

External examination of the child. This should embrace the following particulars :

- (a.) Every thing relating to its external appearance, shape, conformation, condition as to putrefaction, wounds, spots, ecchymoses, &c.
- (b.) Its size, including not merely the size of the whole body as to length, but the dimensions of the head and of the thorax.
- (c.) Its weight.
- (d.) The condition of the umbilical cord.

Internal examination. This should include,

1. The condition of the organs of circulation :

- (a.) The foramen ovale.
- (b.) The ductus arteriosus ; its dimensions and shape.
- (c.) The ductus venosus.
- (d.) The state of the umbilical vessels.

2. The condition of the respiratory organs :

- (a.) The shape of the thorax.
- (b.) The situation of the diaphragm.
- (c.) The colour of the lungs.
- (d.) Their volume.
- (e.) Their shape.
- (f.) Their situation.
- (g.) Their consistence or density.
- (h.) Their absolute weight.
- (i.) Their specific weight.

3. The condition of the abdominal organs :

- (a.) The liver ; its weight.
- (b.) The stomach and intestines ; particularly the large intestines, with a view of ascertaining the presence or absence of the meconium.
- (c.) The state of the urinary bladder.
4. The condition of the brain and spinal marrow.

Mode of conducting the dissection of a child.

It will be found most convenient to commence the dissection with the mouth and the cavities leading to the chest. An incision

should first be made from the under lip to the top of the sternum, and another along the lower edge of the inferior maxillary bone; after which, the integuments are to be dissected back. The lower jaw is then to be divided at its symphysis, and the two portions separated. By bending the head back, we shall now be able to obtain a complete view of the cavity of the mouth. The position of the tongue should now be examined. If any foreign matters are found in the mouth, they should be especially observed and noted. In short, every unnatural appearance, whether morbid or artificial, should be carefully investigated and recorded.

The larynx and trachea must next be laid open. If any fluid is found, it should be specially examined.

So much of the œsophagus as can now be seen, is also to be examined.

The abdomen is next to be opened. The first incision is to be continued down to the lower part of the sternum, and from this point, an incision made through the integuments to the spine of the ilium on each side. The triangular flap thus made, is then to be turned down, and the umbilical vessels to be examined and tied. The diaphragm is to be observed, whether it be much arched, or otherwise. The viscera of the abdomen are next to be inspected, and every thing peculiar in their appearance or condition to be noticed. The ductus venosus should be examined, whether it be pervious, and contain any blood. After tying the vessels leading to the liver, it should be taken out and weighed. The whole of the intestinal canal, with the stomach, should be taken out, after having tied the two ends. The contents of the stomach are to be critically investigated, especially to ascertain if it contain any milk. If there is any suspicion of poison, the ordinary tests for ascertaining it should be resorted to. The state of the gall bladder and urinary bladder should be examined, whether they be empty or not. Lastly, it should be seen whether there be any meconium in the intestinal canal.

In opening the thorax, the ribs and sternum must be divided in the ordinary manner; and in doing this, a scissors will be found a much more safe and convenient instrument than a scalpel. Having exposed the thorax to view, the general appearance, position and colour of the lungs are to be remarked.

The aorta, the carotids, and venæ cavæ are to be tied and cut beyond the ligatures. The trachea is now to be divided as near

as possible to the lungs. The lungs should then be taken out and weighed, and after this, subjected to the experiments already detailed in a previous page. The heart is next to be examined, and it should be particularly noted whether the auricles and ventricles are filled with blood; the state of the ductus arteriosus should be ascertained; and lastly, the state of the foramen ovale.

As the death of an infant may not unfrequently be caused by injury inflicted on the spine, it becomes necessary to examine this part also. A longitudinal incision should be made from the occiput to the sacrum—the muscles to be separated and turned back. By means of strong scissors, the vertebræ are then to be divided on each side. The posterior part of the spine thus separated, may easily be removed, and the whole canal exposed for examination.

In opening the head an incision should be made from the lower part of the frontal bone down to the second or third cervical vertebra, and another at right angles to this from ear to ear. By dissecting back the integuments thus divided, the cranium will be completely exposed. The cranium should now be carefully examined, to see if there be any fractures, punctures, wounds, &c. The bones are next to be removed, and the most convenient method of doing this will be to separate them by a scissors along their membranous connexion with each other. Great care should be taken not to occasion any laceration during the dissection.

The substance of the brain must be carefully investigated, and every deviation from the natural and healthy state observed. Although this examination of the brain can throw no light upon the question whether a child has been born alive, yet it may aid us materially in detecting the cause of its death.

Having completed the dissection, the inferences to be drawn from the information thus obtained, must be obvious. They have been so fully explained in the former part of this chapter as to render unnecessary any recapitulation.

EXAMINATIONS AND REPORTS.

Having finished the discussion of the various points connected with the subject of infanticide, I shall close this part of it with

the history of a few cases and reports. They are all taken from French authorities, and I have selected them not merely with the view of illustrating the doctrines previously advanced, but of showing the manner in which criminal cases are investigated and reported upon, on the continent of Europe. It is to be hoped that a similar mode may ere long, be adopted in this country.

1. *Infanticide proved in an infant that had not respired.**

The subject of this report was a new-born infant which had been found in an uncultivated field the evening previously. The inspection and report were made by virtue of an ordinance of the agent for the *Procureur du Roi*.

Examination. The cadaveric rigidity was still very marked,—*death had therefore taken place very recently.*

It was impossible to determine the weight for want of a balance. Length, fourteen inches, six lines, Fr. The middle of the body corresponding to six lines above the umbilicus. Bi-parietal diameter of the head, two inches six lines; occipito-frontal, three inches; occipito-mental, four inches. Skin well organised; very distinct from the membranes of the cord around the umbilicus. Hairs about half an inch long, but very numerous. Total absence of point of ossification between the condyles of the femur. (This infant had not, therefore, attained *the term of eight months of utero-gestation.*)

At the posterior and upper part of the head, on the median line of the occipital bone and in the course of a portion of the parietal suture, *a wound existed, an inch and eight lines long*, having at its centre on one of the lips, a slight prominence, on the other lip a slight parallel depression, as if the wound had been made at two different times, or as if the instrument had changed its direction. *In the whole circumference of this wound, and in the subpericranial cellular tissue, an ecchymosis existed, which extended to the third of the superior surface of the head under the form of a bloody cap (calotte); the infiltrated blood was coagulated.* Towards the middle of the upper margins of the left parietal bone, in the vicinity of the superior angle of the wound just described, there was *a section of the margin of the parietal bone, with separation and elevation of one of the fragments of the section, which was seven lines in depth. The longitudinal sinus of the dura mater was opened; blood was effused between the two lobes of the brain, as well as at the surface of the cerebellum. Two contusions of the cerebellum with coagulated and infiltrated blood existed at the base of that organ. These were four lines long and two broad.* The two temporal muscles were completely ecchymosed; and the blood infiltrated into the substance of their fibres caused the temporal aponeuroses to project. *These were the result of violence evidently perpetrated during life, and which it would have been impossible to produce if the child had been still in the womb.*

* This case is reported by M. Devergie, in the *Annales d'Hygiene Publique, &c.*, May, 1837. Translated by Prof. Dunglison, in his *American Medical Library and Intelligencer* for Dec. 1837.

A portion of the cord, eight inches long, adhered to the umbilicus by means of the membranes and the vessels, wholly untouched. This portion of the cord, which contained a large quantity of the jelly of Wharton, was sound, renitent, and presented at its free extremity a clean section, as if it had been made with scissors; another portion of the cord, separated from the rest, as regarded conformation, colour, volume, and consistence, was entirely like that attached to the umbilicus; the two fine extremities were cut clean.

The placenta, which was very fresh, was in proportion to the development of the infant. It had only an inch and a half of cord attached to it.

The skin was generally pale, as well as the thymus, the lungs, and the intestines, which were contracted. The cavities of the heart contained little blood. The lungs were perfectly sound, and did not appear to fill the cavity of the chest; their tissue was formed of a series of fleshy lobules, separated from each other by cellular tissue; no air vesicles were perceptible. The lungs when placed in water, with the heart, sank; when placed alone in water they sank; when cut into portions, they also sank. Each fragment compressed under water yielded scarcely any blood from its tissue, and no air bubbles; after compression it remained at the bottom of the liquid. Meconium was contained in the sigmoid flexure of the colon and in the rectum; the foramen ovale was open; the umbilical arteries and vein were widely open.

Conclusion.—1. The infant subjected to examination, had not attained the end of the eighth month of pregnancy. 2. It proceeded from a recent accouchement, which might have occurred in the night of the —, to the —. 3. The infant was born alive. 4. It had not respired. 5. Death was the necessary result of the wounds that have been described; one of them had been effected by a cutting and perforating instrument, the other by blows. 6. It is possible that after the section of the cord there might have been a loss of blood, which might account for the exanguinous state of the body.

Such is a satisfactory case of infanticide, established in the case of a child that had not breathed and yet was alive.

2. *Report proving infanticide, from violence applied to the head.**

We, the undersigned, doctors of medicine and surgery, of the faculty of — inhabitants of the town or parish of —, canton of —, arrondissement of —, department of —, upon the requisition of —, made known to us by Mr. N. bailiff, went there this — day of the month of —, year —, hour —, with Messrs. N. N., in the house of —, situated in the street of —, No. —, story, — room —, to visit there the corpse of a child of the — sex, which had been found in the morning under a heap of dirt, in the yard of the said house, and to ascertain the cause of its death.

Arrived in the house and room designated, they presented to us the said body, wrapped in coarse rags of woollen stuff much worn, and moth-eaten. After having stripped it, we observed that there was attached to the umbilicus, a portion of the umbilical cord, still fresh, without any ligature, and about five inches in length, of which the open extremity was very visibly unequal and fringed; which convinced us that the cord had been broken or torn by force. The body was still covered over with the unctuous and whitish sub-

* Capuron's Médecine Legale, p. 494.

stance that almost all children have at their birth; this substance was mixed, in some places, principally on the head, shoulders, and buttocks, with dust and blood.

To enable us to examine the body with care, we had it washed and carefully dried. We observed afterwards that it was large, fat, well formed, exempt from putrefaction and fœtor. Its whole length was nearly twenty inches, and its weight about seven pounds. The whole of the surface of the trunk was soft and of a pale colour, except on the back, where we remarked an ecchymosis or violet stain, unequally circumscribed and oblong, about three and a half inches in length, and two inches in width, which did not extend beyond the adipose tissue—of which we assured ourselves by dissection. The flesh of the limbs was soft, and all the joints flexible; the left elbow and the thumb of the corresponding hand slightly excoriated, as well as the external part of the knee, and the heel of the same side. The face was of a livid colour, the right cheek of a very deep brown, and deeply infiltrated with blood, of which we assured ourselves by two incisions; the eyelid, the eye, the forehead and the temple of the side, were ecchymosed and blackish.

The skull was very soft on the right side, changed its form by the slightest pressure, and sank down when it was placed on the opposite side. The skin on the temporal region of the right side, from the top to the neck, and from the forehead to the occiput, was brownish; and through this skin could be distinguished, by the fingers, the fluctuation of a fluid which seemed to have separated it from the bones. We convinced ourselves, by means of an incision, that it was an effusion of blood, partly coagulated, which extended over all the parietal bone, and upon the squamous portion of the temporal bone. The first of these two bones, in its middle and superior part, was entirely detached from the neighbouring bones, as well as from the pericranium, and from the dura mater. It was also fractured in two places and in two ways, viz. directly from the third superior of its anterior edge to the corresponding point of its posterior edge, and obliquely from the parietal swelling to the temporal bone. This last bone was equally broken in its superior edge, and its articulation with the lower jaw was so altered that we could neither distinguish its form or structure.

The other parts of the body presented no appearance of lesion externally. We observed, only on the left side of the chest, at a half inch from the sternum, between the second and third rib, a small round wound, half a line in diameter. A similar wound existed on the left side of the neck and immediately above the shoulder. But neither penetrated beyond the skin, as we proved by dissection.

On opening the head, we found the right lobe of the brain covered with blood, and completely disorganized; it had no longer its natural form, structure or consistence. We found also at the basis of the skull, about two ounces of serum.

On opening the chest, we perceived no defect of conformation in the organs; the heart and the large vessels were gorged with blood, the lungs developed and of a rose colour. After having detached, wiped and weighed these last organs, we placed them in water; at first entire, afterwards by pieces, which we pressed hard in a linen, and they swam equally in both cases.

On opening the abdomen, the viscera presented no alteration nor deformity; the large intestine was filled with meconium, and the bladder contained a little urine.

After all these observations, we conclude and declare that the child, whose body we examined, was of full term, strong and well made; which is attested by its volume, weight, dimensions, and its exterior conformation.

That it was born alive, which is proved by the ecchymosis and infiltration of the face, as well as by the effusion of blood below the integuments of the skull.

That it has completely respired, as we proved in examining the state of the lungs, and in placing them in water, when they completely floated.

That it died shortly after its birth; which is also proved by the adhesion of a portion of the umbilical cord to the umbilicus; by the unctuous and whitish substance with which the skin was covered, and by the meconium with which the large intestine was filled.

That it had not been long dead; which is proved by the absence of fetor and of every mark of putrefaction; by the softness and freshness of the flesh, and by the flexibility of the joints.

That the death of the child could not be the effect, either of a hæmorrhage by the umbilical cord; which is proved by the engorgement of the heart and of the large vessels;—nor of suffocation; which is proved by the absence of any alteration in the chest and lungs;—nor of any natural or ordinary cause, which is proved by the marks of violence impressed on the head and face, which attest, on the contrary, a violent death;—nor of a fall on the skull, where we observed fractures of which the situation, the form, the number and direction, prevent us attributing it to this cause.

Finally, that the death of this child is the effect of blows or external violence, given a short time after its birth, on the right side of the head and of the face; the only cause to which we could attribute the fractures of the skull, the effusion of blood in this cavity and the disorganization of the brain.

In testimony of which, we have drawn up the present report, which we closed at the house of ——— in presence of ———, and which we certify to be correct.

Signed.

3. *Report on a case of infanticide in consequence of omitting to tie the umbilical cord.**

I, the undersigned, doctor in medicine, and physician of the Hospital of Tre-voux, report, that in consequence of a request from the magistrate to go to the commune of ———, to visit the body of a new-born child, which the mayor of that commune declared he would not permit to be buried, until the cause of its death had been proved, I repaired to said commune on the 5th of November, 1811, and made inquiries of the female in whose possession I found the body of the child. In reply to my interrogatories, she stated that she had

* Manuel de Médecine Legale, par Briand, p. 314.

received the said child the day before, at five leagues distance from that place, in a clandestine manner from M. * * * enveloped in a strong covering, and with an order to depart instantly. That during her journey, not hearing it cry, she put it to the breast; she found, however, that it scarcely breathed and would not suck, and on her arrival with it, in spite of all her care, the child was dead. On examining the child's clothes, she found them all bloody, and the blood appeared to come from the umbilical cord. After this information, I proceeded to examine the body of the child, and found it to be a male, seventeen inches long and only four pounds in weight, having its nails and hair like a child at the full time. The skin, both of the face and of the whole body was of the colour of white wax—the lips were of the same colour, instead of being rosy—the limbs were flaccid and pliable, and the lower part of the belly very projecting. On examining carefully the whole surface of the body and all the external cavities, no trace of violence of any kind could be discovered. The state of the umbilical cord, however, struck me particularly. It had a ligature upon it, but so loose that the handle of a bistoury could be run between the cord and the ligature. On measuring the cord I found it cut off clean at three inches from the umbilicus. I now proceeded to open the chest. The lungs and heart were such as they ordinarily are in children who have respired, but of a very pale colour. Having detached the viscera for the purpose of making experiments on the lungs, the following things were observed: 1. In separating the heart and lungs from the chest, not a single drop of blood was perceived, nor was there any during the dissection. 2. The lungs pressed between the hands and cut with a knife, crepitated throughout their whole extent. They were also perfectly healthy. 3. On putting the heart and lungs connected together in a bucket of water at the temperature of 10° Reaumur, the whole floated perfectly. 4. The quantity of blood found in the heart and large blood-vessels after having opened them, was only two ounces. The cavity of the abdomen and its contents were then examined, but presented nothing peculiar, with this exception, that the liver was much paler than common, and the large vessels dissected and followed up even to the extremity of the cord, contained not a drop of blood. The urinary bladder and the intestines were found empty; the first of urine and the second of meconium.

From these various observations, I draw the following conclusions: 1. That the child in question was born at the full term, alive, and in a sound state. 2. That it must have performed a great number of full and complete respirations, and that it must have lived several hours. 3. That it did not receive any violence, properly so called, such as blows, contusions, &c., which could have caused its death. 4. That its death was the result of hæmorrhage from the umbilical cord, and that it is probable that the flat string which loosely surrounded the extremity of the cord, was placed there as a ligature, after life had already been entirely extinguished by the hæmorrhage.

4. *Report of a case of recent delivery.**

We the undersigned, professors of the faculty of medicine, &c. —, at the request of the commissary of police of the division of Luxembourg, went with

* *Considerations sur l'Infanticide, par Lecieux, p. 68.*

him this day, (Sunday,) 1809, at 10 o'clock in the morning, to a house occupied by Me. Catharine Tillard, for the purpose of visiting her daughter Nanette Tillard, who was supposed to have been delivered of a child on Thursday morning the 9th of this month, and to give evidence concerning her situation.

We found the said Nanette Tillard in bed, and from the examination which she underwent, we made the following observations.

1. Her face was somewhat pale ; her eye heavy, and slightly discoloured.
2. Her pulse was febrile, full and fluctuating ; the skin was soft and pliable, a little heated, and with a moisture on it, which had the acid odour which is peculiar to women in childbed.
3. The breasts were tumid and painful ; milk had already issued from the nipple, as we convinced ourselves by examining the stains on the linen of the patient : moreover, in squeezing the breast gently, we expressed a milky fluid well marked by its colour and consistence.
4. The abdomen was soft ; the skin was loose, wrinkled, covered with little shining reddish, whitish lines, crossing each other in different directions, running chiefly from the region of the groins and of the pubis to the umbilicus ; a brownish line was also visible, running from the pubis to the umbilicus, and we perceived that the median line of the abdominal muscles had experienced considerable extension, as was ascertained by the irregularity of its course in running the end of the finger over it, especially on the side towards the umbilical region ; finally, through the parietes of the abdomen, we felt the body of the womb, which was voluminous, hard and round, at a little distance from the umbilicus, and contracted itself very distinctly under the hand while pressing it.
5. A whitish fluid, mixed with blood, issued from the genital organs, which had the colour and the strong odour peculiar to parturition, as we convinced ourselves by examining the linen under the patient.
6. The genital organs were slightly tumefied, and very much dilated in their whole extent ; the orifice of the womb was relaxed and soft ; it gave passage to the bloody whitish fluid just mentioned ; it was so pliable, and so much dilated, that we could easily have introduced several fingers.
7. Finally, we found by examination that the pelvis was large, wide, and well constructed for an easy delivery.

From these different observations, we affirm,

1. That Nanette Tillard had been delivered three or four days at the farthest ; which is satisfactorily proved by the condition of the breasts, the secretion of the milk in them, the smell of the perspiration, the nature of the discharge from the genital organs, the state of the womb, of the abdomen, and of the genital organs.
2. That no disease or affection other than delivery, could produce all these effects combined, which we have observed.
3. That from the formation of the pelvis, Nanette Tillard could be delivered easily and promptly.

PART III.

Of infanticide in its relations to medical police, including a history of legislation on the subject, and an examination of the effects of foundling hospitals.

Infanticide, which at one period prevailed so universally and without restraint among the most polished nations of the world, is now considered, in all enlightened countries, as a crime of the deepest dye. Mankind, on this subject, have vibrated from one extreme to the other; and it is not to be questioned, but that in modern times, many an innocent female has been sacrificed to suspicion and prejudice. The *principle*, however, which now guides the moral judgment of society on this subject, is undoubtedly just; for it is a crime which presupposes the obliteration of those feelings which human nature ought to be most proud of, and which, if countenanced, or but slightly punished, must lead to the most dreadful consequences.

That a young female of character and reputable connexions, may be betrayed by the arts of a base seducer, and when reduced to a state of pregnancy, to avoid the disgrace which must otherwise be her lot, may stifle the birth in the womb, or after it is born, in a state of frenzy, imbrue her hands in her infant's blood, in the expectation of throwing the mantle of oblivion over her crime, is a case which too frequently occurs; but even such a case, with all its palliations, cannot be considered as less than wilful murder, and as such demands exemplary punishment.

It is not, however, enough for a wise legislation, merely to punish crimes after they are perpetrated; it should also adopt the most effectual means of preventing their commission altogether. In the language of a philosopher, it may be said, that "the punishment of a crime cannot be just, if the laws have not endeavoured to prevent that crime by the best means which times and circumstances would allow."*

With regard to infanticide, it is impossible to suggest any method of arresting it completely, unless there be a total reformation of that corruption of manners which lies at the root of the evil. Next to this, the dread of severe punishment is the

* Beccaria's Essay on Crimes and Punishments, p. 104. New York edition.
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most effectual preventive. Foundling hospitals were also established with this intent ; whether they have this tendency, I shall consider presently, after having enumerated the laws enacted by different nations for the purpose of preventing and punishing this crime.

1. *Laws against criminal abortion or feticide.*

Although the Jewish code specified nothing relative to criminal abortion, or to the murder of the new-born infant, yet it decreed, that if a pregnant woman should be *accidentally* injured in a fray between two men, so that she proved abortive, without any injury to her own person, the punishment was a fine, such “as the judges might determine.” If the woman received any personal damage, the law of retaliation was then to operate—an eye for an eye, and a tooth for a tooth, &c. If she lost her life, death was the punishment.*

After the Romans began to consider the procuring of abortion as a crime, they denounced punishments against the authors of it. These, as has been already noticed when considering the animation of the fœtus, varied with the changes that took place in the philosophical sentiments of the nation. In the year 692, a council, convened in the palace of the emperor at Constantinople, ordained that it should be punished with the same severity as homicide.†

In *France*, the Roman law was adopted, and practised upon until the revolution. Their parliaments frequently condemned midwives to be hanged, for procuring abortion in girls ; and physicians, surgeons, and others guilty of this crime, were subjected to the same punishment.‡ The French code of 1791, commuted the punishment to twenty years’ imprisonment in chains. The penal code of the empire, adopted by Napoleon in 1810, contains the following provisions against this crime : “ Every person who, by means of aliments, beverages, medicines, acts of violence, or by any other means, shall procure the untimely delivery of a pregnant woman, although with her consent, shall be sentenced to *confinement*, (reclusion.”)

“ The same punishment shall be inflicted upon the mother who shall make use of such means, if they are followed by abortion.”

* Exodus, chap. xxi. v. 22, 23.

† Fodéré, vol. 4, p. 383.

‡ Fodéré, vol. 4, p. 348.

“Physicians, surgeons, apothecaries, and other officers of health, who shall prescribe or administer such means of abortion, shall, if a miscarriage ensue, be sentenced to hard labour for a limited time.”*

The criminal code of *Austria*, established in 1787, by Joseph II. in which the punishment of death is totally abolished, decrees, that a woman with child, using means to procure abortion, shall be punished with imprisonment for not less than fifteen, nor more than thirty years, and condemnation to the public works; augmented, when married.”

“Accomplices advising and recommending abortion—imprisonment not less than one month, nor more than five years, and condemnation to the public works. The punishment to be increased, when the accomplice is the father of the infant.”†

“The laws of Germany punish with from two to six years imprisonment, a woman (or her aiders, &c.) who, by potions or other means, shall have wilfully produced abortion, within the first thirty weeks from the time of conception; and the penalty is protracted to eight, or at the utmost to ten years, when such a crime has been committed within the last month of pregnancy.

The laws of Bavaria enact similar measures.

In the Italian code it is established, “that if a woman has used means, with the intent to produce abortion, and this shall *not* have taken place, she is to be punished by imprisonment, for a period of from six months to one year; but if abortion has been the consequence of such means, the imprisonment is to be of from one to five years’ duration. The same penalties, but with exacerbations, are enacted against the father of the foetus, if he has been an accomplice in the crime. Finally, the delinquent, who, against the will of the mother shall have caused abortion, or have made an attempt to cause her abortion, is to be punished by from one to five years’ severe imprisonment; and if the life of the mother has thereby been brought into danger, or her health injured, the duration of the penalty shall be from five to ten years.‡

The English law is thus stated by Blackstone. “If a woman is quick with child, and, by a potion or otherwise, killeth it in her womb, or if any one beat her, whereby the child dieth in her

* Article 317. For the translation of the whole code, see Walsh’s *American Review*, vol. 2.

† Treatise on the Police of London, by P. Colquhoun, LL. D. 7th edition, p. 656

‡ London Medical and Physical Journal, vol. 43, p. 96.

body, and she is delivered of a dead child, this though not murder, was by the ancient law *homicide*, or manslaughter. But the modern law doth not look upon this offence in quite so atrocious a light, but merely as a heinous misdemeanour.”* “But, if the child be born alive, and afterwards die in consequence of the potion or beating, it will be *murder*.”† By a subsequent law, enacted in 1803, called the Ellenborough act, it was ordained, that “if any person shall wilfully and maliciously administer to, or cause to be administered to, or take any medicine, drug, or other substance or thing whatsoever, or use, or cause to be used or employed, any instrument, &c., with intent to procure the miscarriage of any woman, *not being*, or not being *proved* to be *quick* with child at the time of committing such thing, or using such means, then, and in every such case, the person so offending, their counsellors, aiders and abettors, shall be and are declared guilty of felony, and shall be liable to be fined, imprisoned, set in and upon the pillory, publicly or privately whipped, or transported beyond the sea for any term not exceeding fourteen years.”‡ The same act ordains, that administering medicines, drugs, &c., with the intent to procure abortion *after quickening*, shall be punishable with death.

On examining these provisions, it will be seen that there was a striking omission in the English law, against the procuring of abortion, *after a woman is quick* with child. The statute prescribed death as the punishment for administering any noxious or destructive substance, with an intent to destroy the child, and yet inflicted no punishment when the same was actually procured by mechanical violence. This defect of the statute was illustrated in a trial (already alluded to in a previous part of this essay) which took place in England, in 1808. One Pizzy, a farrier, and another person, (a female,) were indicted for administering a noxious and destructive substance to Ann Cheney, with intent to produce miscarriage. It was proved by the deposition of Cheney herself, that repeatedly during her pregnancy she had taken medicines from the accused without producing any effect, and finally, that a few days before her delivery, he took her up stairs alone, and introduced an instrument into her body. This was repeated, as the first attempt had not succeeded, and accordingly

* Blackstone's Commentaries, vol. 1, p. 129.

† Ibid, Note by Christian.

‡ Statutes at Large, 43 George III. cap. 28. Male's Medical Jurisprudence, p. 114.

after the last one, she had never felt the child move. The jury, however, acquitted the prisoners, expressing themselves not fully satisfied with the evidence to convict. On the trial, the counsel for the prisoner even objected to receiving that part of the evidence which related to his manual operations, as not relevant to the administration of the medicines, which alone constituted the capital crime; and the criminal was tried for giving medicine which had no effect, while the actual perpetration of the crime by mechanical violence, could only be noticed in court as proving the intention with which the medicines were given.* By a late statute, however, (9 George IV. chap. 31, passed 27th June, 1828,) and entitled "An act for consolidating and amending the statutes in England relative to offences against the person," this omission is provided for, and the whole law is recast. It now stands thus, "If any person, with intent to procure the miscarriage of any woman then being quick with child, unlawfully and maliciously shall administer to her, or cause to be taken by her any poison or other noxious thing, or shall use any instrument or other means whatever with the like intent, every such offender and every person counselling, aiding or abetting such offender, shall be guilty of felony and shall suffer death as a felon; and if any person with intent to procure the miscarriage of any woman, not being, or not being proved to be, then quick with child, unlawfully and maliciously shall administer to her, or cause to be taken by her, any medicine or other thing, or shall use any instrument or other means whatever with the like intent, every such offender and every person counselling, aiding, or abetting such offender, shall be guilty of felony, and being convicted thereof, shall be liable to be transported for any term not exceeding fourteen years, nor less than seven years, or to be imprisoned, with or without hard labour, in the common jail or house of correction, for any term not exceeding three years, and if a male, to be once, twice, or thrice, publicly or privately whipped, (if the court shall so think fit,) in addition to such imprisonment."

The *Law of Scotland* on this subject, appears to differ. Mr. Hume, in his *Commentaries on the Criminal Law of Scotland*, says, that all procuring of abortion, or destruction of future birth, whether quick or not, is excluded from the idea of murder, be-

* Edinburgh Medical and Surgical Journal, vol. 6, p. 244.

cause, though it be quick, still it is only *pars viscerum matris*, and not a separate being of which it can with certainty be said, whether it would have become a quick birth or not. Since Mr. Hume wrote, a case occurred in the High Court of Justiciary, where the subject was discussed. A surgeon and midwife, indicted for the violent procuring of abortion, were convicted and sent to Botany Bay for fourteen years.*

Mr. Alison, one of the latest writers on Scotch law, states it to be as follows: "If a person gives a potion to a woman to procure abortion, and she die in consequence, this will be murder in the person giving, if the potion given was of that powerful kind, which evidently puts the woman's life at hazard." And again—"administering drugs to procure abortion is an offence at common law, and that equally whether the desired effects be produced or not." Thus cases occurred in 1806 and 1823, where persons were sentenced to transportation for using instruments to procure it; and in 1824, another was condemned to the same punishment, for administering arsenic with a like design.†

In the state of New York, the following are at present the laws. The first quoted have reference to the death of the mother, or the unborn quick child; the last, to the procuring of abortion.

"Every person who shall administer to any woman pregnant with a quick child, any medicine, drug, or substance whatever, or shall use or employ any instrument or other means, with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, or shall have been advised by two physicians to be necessary for such purpose, shall, in case the death of such child or of such mother be thereby produced, be deemed guilty of manslaughter in the second degree.

"The wilful killing of an unborn quick child, by any injury to the mother of such child, which would be murder if it resulted in the death of such mother, shall be deemed manslaughter in the first degree."‡

The punishment for manslaughter, first degree, is imprisonment in the State prison for a term not less than ten years; for the second degree, not less than four and not more than seven years.

* Edinburgh Medical and Surgical Journal, vol. 6, p. 249.

† Alison's Principles of the Criminal Law of Scotland, p. 52 and 628.

‡ Revised Statutes, vol. 2, p. 661. Session Laws of 1830, p. 401.

“Every person who shall wilfully administer to any pregnant woman, any medicine, drug, substance or thing whatever, or shall use or employ any instrument, or other means whatever, with intent thereby to procure the miscarriage of such woman, unless the same shall have been necessary to preserve the life of such woman, or shall have been advised by two physicians to be necessary for that purpose, shall, on conviction, be punished by imprisonment in a county jail, not more than one year, or a fine not more than five hundred dollars, or both.”*

In the state of Ohio, the law against abortion is the following: “If any physician or other person, shall administer to any pregnant woman any drug, &c., or shall use any instrument or other means whatever, with intent thereby to procure the miscarriage of such woman, unless the same shall have been necessary to preserve the life of such woman, or shall have been advised by two physicians to be necessary for that purpose, he shall, on conviction, be punished by imprisonment for not more than one year, or by fine not exceeding five hundred dollars, or by both. If the woman be pregnant with a quick child, such person shall, in case of the death of the child or the mother by such means, be imprisoned in the penitentiary, not more than seven years, nor less than one year.”†

In the state of Connecticut, the law enacts, that for administering any noxious or destructive substance for the purpose of procuring the miscarriage of a woman quick with child, the punishment, on conviction, shall be imprisonment in Newgate prison during his or her natural life, or for such other term as the court having cognizance of the offence shall determine.‡

In Missouri, the administration of poison with an intent to procure abortion, is punished by imprisonment for a term not exceeding seven years, and a fine not exceeding three thousand dollars.§

2. *Laws against the murder of the new-born infant.*

These, in almost all civilized countries, are capital. Previous to the fourth century, the edicts of the Roman emperors against this crime were partial and ineffectual; towards the latter part

* Revised Statutes, vol. 2, p. 694.

† Revised Laws of Connecticut, p. 152.

‡ American Jurist, vol. 13, p. 211.

§ Laws of Missouri, 1825, p. 283.

of that century, however, it was completely prohibited. The following is the article relating to it in the Cod. Justin. lib. viii. tit. 52, de infant. expositis, 1, 2: "Unusquisque sobolem suam nutrit. Quod si exponendam putaverit, animadversioni quæ constituta est, subiacebit."*

The following statement of the laws against infanticide and abortion in the middle ages, is given in the Cabinet Cyclopædia of Dr. Lardner.

Among the Germanic nations of the middle ages, "death was the penalty of infanticide, generally, even at the time of birth; or if the judge spared the midwife, she lost her eyes." Among the Bavarians, there was a singular provision against abortion: "the pecuniary mulct was not only to be paid *annually* by the man who caused the abortion, but annually by his descendants to the seventh generation; for as the child or fœtus had not been baptized, and as its doom was, consequently, everlasting fire, no ordinary penalty should meet such a crime."† Among the Lombards, "in the twelfth century, we find the Lex Pompeia fully in force.‡ Infanticide was also terribly visited on the wretched mother, who was buried alive, and a stake thrust through her body. Subsequently we find some changes in the mode of punishment, as regarded both parricide and infanticide; sometimes the culprits were dragged by red-hot forceps to the place of execution; but the unnatural mother, even if she were only guilty of producing abortion, was often sewed in a sack, and thrown into a river. In Saxony, even at a late period, a viper, monkey and dog were sewed in the same sack; and at a later period, too, in Siberia and Lusatia, the living grave and stake were in use."§

The emperor Charles V. condemned the mother to death only in cases where it could be proved that the child had been born alive.|| The Caroline code, (*Constitutio Carolina*.) in such cases ordained, that the guilty person should be tied in a bag with a live cock and a cat, and thrown into a river.¶

In 1556, Henry II. of France, made a law condemning to death every woman convicted of having concealed her preg-

* Beckman's History of Inventions, vol. 4, p. 437.

† Dunham's Europe in the Middle Ages, (Lardner, No. 49,) vol. 2, p. 145.

‡ Cod. Justin, 1, 9, pr. a. ad. Leg. Pomp. de Par. § Dunham, vol. 2, p. 146.

|| Fodere, vol. 4, p. 396.

¶ Male, 2d edition, p. 271.

nancy, and put to death a bastard child. This law prevailed until the year 1791,* when every thing relating to the concealment of pregnancy was repealed, and death declared to be the punishment of the murder of the child.

The penal code of the French empire enacted, that "every person guilty of assassination, parricide, *infanticide*, or poisoning, shall suffer death."—Art. 302.

Other articles provide against the exposure and abandonment of infants. "Those who shall expose and abandon in a solitary place, a child under seven years of age, and those who may order it to be exposed, shall, on that account alone, if such order be executed, be imprisoned for a term not less than six months, and not more than two years, and fined from sixteen to two hundred francs."—Art. 349.

And "if, in consequence of such exposition or abandonment, the child shall be mutilated or crippled, the act shall be considered and punished as in the case of wounds voluntarily inflicted; and if the consequence be death, it shall be considered and punished as *murder*."—Art. 351.†

The *Austrian law* provides, that "exposing a living infant, in order to abandon it to danger and death, or to leave its deliverance to chance, whether the infant so exposed suffers death or not, shall be punished by imprisonment for not less than eight, nor more than twelve years; to be increased under circumstances of aggravation."‡

Although the *Chinese* have no law prohibiting the exposure of children, yet they inflict a slight punishment for the wanton murder of them. The following is the law on that subject: "If a father, mother, paternal grandfather or grandmother, chastises a disobedient child in a severe and unc customary manner, so that he or she dies, the party so offending shall be punished with one hundred blows.§

The *English law* on this subject has, within a few years, been materially changed.

By the Stat. 21, Jac. I. c. 27, it is enacted, that "if any woman

* Foderé, vol. 4, p. 365. † American review, vol. 2, p. 396. ‡ Colquhoun, p. 66.

§ La Tsing Leu Lee; being the fundamental laws, and a selection from the supplementary statutes of the penal code of China. By Sir George Staunton, F. R. S. (Quarterly Review, vol. 3, p. 312, 13.)

be delivered of any issue of her body, which being born alive, should by the laws of this realm be a bastard; and that she endeavour privately, either by drowning or secret burying thereof, or any other way, either by herself or the procuring of others, so to conceal the death thereof, as that it may not come to light: whether it were born alive or not, but be concealed: in every such case, the said mother so offending, shall suffer death as in the case of murder, except she can prove by one witness at the least, that the child whose death was by her so intended to be concealed, was born dead.”*

Upon this statute, Blackstone remarks, “This law, which savours pretty strongly of severity, in making the concealment of the death almost conclusive evidence of the child being murdered by the mother, is, nevertheless, to be also met with in the criminal codes of many other nations of Europe, as the *Danes*, the *Swedes*, and the *French*.”†

This cruel law has since been mitigated. In 1803, an act was passed in that country, which decrees, that “women tried for the murder of bastard children, are to be tried by the same rules of evidence and presumption as by law are allowed to take place in other trials of murder: if *acquitted*, and it shall appear on evidence that the prisoner was delivered of a child, which by law would, if born alive, be a *bastard*, and that she did, by secret burying or otherwise, endeavour to conceal the birth thereof, thereupon it shall be lawful for such court, before which such prisoner shall have been tried, to adjudge, that such person shall be committed to the common gaol, or house of correction, for any time not exceeding two years.”

The English law, according to the 9 George IV. chap. 31. stands at present thus—

“If any woman shall be delivered of a child, and shall by secret burying or otherwise disposing of the dead body of the said child, endeavour to conceal the birth thereof, every such offender shall be guilty of a misdemeanour, and shall be liable to be imprisoned, with or without hard labour, in the common gaol or house of correction, for any term not exceeding two years; and it shall not be necessary to prove whether the child died be-

* East's Crown Law, vol. 1, p. 228. † Blackstone's Commentaries, vol. 4, 198.

fore, at, or after its birth, provided, that if any woman tried for the murder of her child shall be acquitted thereof, it shall be lawful for the jury to find, in case it shall so appear in evidence, that she was delivered of a child, and that she did, by secret burying or otherwise disposing of the dead body of such child, endeavour to conceal the birth thereof, and thereupon, the court may pass such sentence, as if she had been convicted upon an indictment for the concealment of the birth."

In Scotland, "if a woman conceal her pregnancy during the whole period, and shall not call for, or make use of help or assistance in the birth, and if the child shall be found dead or be a missing, she shall be subject to two years' imprisonment."*

In the state of *New York*, we have no particular law concerning this crime, and as the English statutes are not in force, all trials for infanticide must of course be conducted according to the common law, and accessory circumstances can only be considered as proving the intent.

In *Massachusetts*, the mere concealment of a bastard child is punished with a fine not exceeding £50. For concealing the death, whether the child have been murdered or not, the mother is punished by being set on a gallows with a rope about her neck, for the space of one hour, and is further bound to her good behaviour at the discretion of the court. If convicted of the wilful murder of the infant, the crime is murder, and death the punishment.†

In *Vermont*, a law was passed in 1797, punishing with death the murder or concealment of a bastard, if it came to its death by the neglect, violence, or procurement of the mother. This has been repealed, and in the revised laws of that state it is enacted, that if a woman be privately delivered of a bastard, and it be found dead, and if there be presumptive evidence of neglect or violence on the part of the mother, the punishment shall be a fine not exceeding five hundred dollars, and imprisonment not over two years; one or both at the discretion of the court.‡

In *Connecticut*, the law determines, that if a woman conceal her pregnancy, and be delivered secretly of a bastard, she shall

* Alison's Principles of the Criminal Law of Scotland, p. 151.

† Laws of Massachusetts, 1807, vol. 1, p. 222.

‡ Laws of Vermont, 1808, vol. 1, p. 349.

be punished by a fine of not more than one hundred and fifty dollars, or imprisonment not over three months. For concealing the death of a bastard, so that it may not be known whether it was born alive or not, or whether it was murdered or not, she is set on a gallows with a rope about her neck for one hour, and imprisoned for not more than one year.*

In *New Jersey*, the concealment of pregnancy, and delivery in secret, is considered a misdemeanour, and punished by fine and imprisonment. Concealing the death of the bastard, is also punished by fine and imprisonment.†

In *New Hampshire*, the concealment of the death of a bastard child, is made a crime, and the punishment directed, is imprisonment for not more than two years, or a fine not exceeding one thousand dollars.‡

In *Pennsylvania*, by the act passed in 1781, the concealment of the death of a bastard child, was conclusive evidence to convict the mother. "And all and every person, who shall counsel, advise, or direct, such woman to kill the child she goes with, and after she is delivered of such child, she kills it, every person so advising and directing, shall be deemed accessory to such murder, and shall have the same punishment as the principal shall have." This law has since undergone the following alterations. By the act of 5th April, 1790, the constrained presumption that the child, whose death is concealed, was, therefore, murdered by the mother, shall not be sufficient evidence to convict the party indicted, without probable presumptive proof is given that the child was born alive, and that of the 22d of March, 1794, declares, "the concealment of the death of any such child, shall not be conclusive evidence to convict the party indicted of the murder of her child, unless the circumstances attending it be such as shall satisfy the minds of the jury that she did wilfully and maliciously destroy and take away the life of such child."§

In *Rhode Island*, the law is very similar to that in *Pennsylvania*.||

* Revised Laws, 1821, p. 152.

† Digest of the Laws of New Jersey, 1833, p. 224, 225.

‡ Digest of the Laws of New Hampshire, 1830, p. 149.

§ Remarks on Infanticide by R. E. Griffith, M. D. Chapman's Journal, new series, vol. 4, p. 260. Laws of Pennsylvania, 1803, vol. 5, p. 6. Addison's Reports, p. 1. *Pennsylvania v. Susannah M'Kee*.

|| Laws of Rhode Island, 1798, p. 597.

In *Delaware*, by a law passed in 1719, the concealment of the death of a bastard child is made a capital offence, except the mother can make proof by one witness at least, that the child whose death was by her so intended to be concealed, was born dead. This, however, was repealed, and I cannot find at present any statute on this subject in the code of that state.*

In *Georgia* and *Illinois*, the concealment of the death of an illegitimate child, is punished with imprisonment.†

In *Michigan*, the laws as to the concealment of pregnancy, the delivery of the bastard child, and its death, are the same as those in New Jersey.‡

3. *Foundling Hospitals.*

Foundling hospitals, by providing for the support of illegitimate children, are generally considered as a great means of preventing child-murder. The object of these institutions is no doubt commendable, but it is certain that they are not productive of that decided utility which is usually attributed to them. It is not to be denied that some good results from them, but it is by no means commensurate with the abuses to which they give rise. That they encourage illicit commerce between the sexes—discountenance marriage—increase the number of illegitimate children, and consequently the number of exposures—are facts confirmed by the history of almost every foundling hospital that has been established. Mr. Malthus states facts of this kind with regard to the foundling hospital in St. Petersburg, (Russia.) “To have a child,” says he, “was considered as one of the most trifling faults a girl could commit. An English merchant at St. Petersburg told me, that a Russian girl living in his family, under a mistress who was considered as very strict, had sent six children to the foundling hospital, without the loss of her place.”§ It is not necessary to enter into a laboured course of reasoning, to prove that the effects of these establishments are decidedly injurious to the moral character of a people. It is a position sufficiently self-evident, and as Malthus justly remarks, “an occasional child-murder, from false shame, is saved at a very high

* Laws of Delaware, 1797, vol. 1, p. 67, vol. 2, p. 670.

† Digest of the Laws of Georgia, 1822, p. 349. Revised Laws of Illinois, 1833, p. 177.

‡ Laws of Michigan, 1820, p. 194.

§ Malthus on Population, vol. 1, p. 368—9.

price, if it can only be done by the sacrifice of some of the best and most useful feelings of the human heart in a great part of the nation.”*

In the language of the *Edinburgh Review*, “such an establishment (a foundling hospital) may safely be termed a great public nuisance, leading to unchaste life and to child-murder, beyond any other invention of the perverted wit of man; for, unless it can receive the fruit of every illicit connexion, which is impossible, it must needs encourage many to enter into such an intercourse, without giving them the means of providing against its consequences.”†

There is, however, another objection to foundling hospitals. The history of such establishments proves that they utterly fail of accomplishing their object, which is the preservation of the lives of children. The records of those which have been kept with the greatest care, exhibit the most astonishing mortality.

In Paris, in the year 1790, more than 23,000, and in 1800, about 62,000 children were brought in; and it is estimated, that eleven-thirteenths of all the foundlings perish annually through hunger and neglect.‡ It is stated also, that vast numbers of the children die from a disease called *l'endurcissement du tissue cellulaire*, which is only to be met with in the foundling hospital.§ Of 100 foundlings in the Foundling Hospital at Vienna, 54 died in the year 1789. Subsequent accounts of this hospital, do not represent it in a more favourable light. In a recent description of this institution, it is stated, that “all attempts to rear the children in the hospital itself had failed. In the most favourable years, only 30 children out of the 100 lived to the age of twelve months. In common years, 20 out of the 100 reached that age, and in bad years not even 10. In 1810, 2583 out of 2789 died. In 1811, 2519 out of 2847 died. Like the cavern of Taygetus, this hospital seemed to open its jaws for the destruction of the deserted and illegitimate progeny of Vienna. The emperor Joseph II. frequently visited this hospital in person, and upon one occasion he ordered Professor Boer to make a series of experiments with all

* Malthus on Population, p. 370. For further illustrations of this fact, see a history of the present condition of public charity in France, by David Johnston, M. D. p. 320, 321.

† *Edinburgh Review*, vol. 38, p. 440.

‡ Beckman's History of Inventions, vol. 4, p. 456-7.

§ Cross's Medical Sketches of Paris, p. 197.

kinds of food, that it might be ascertained how far diet had its share in the mortality. Twenty children were selected, and fed with various kinds of paps and soups, but in a few months most of them were dead.”*

In consequence of this extraordinary mortality, “in 1813, the government enacted that the foundling-house should serve merely as a depot for the children, till they could be delivered to the care of nurses in different parts of the country.” In 1822, under this new system of nursing in the country, the deaths had diminished from 1 to 2, to 1 to $4\frac{1}{2}$.†

In St. Petersburg and Moscow, the foundling hospitals have always been managed with the greatest liberality and care; and yet, in the latter city, during the twenty years subsequent to 1786, when the hospital was first instituted, of 37,000 children received, 35,000 at least are computed to have died. In 1811, the foundlings admitted into the hospitals appropriated to them, were 2517, and the deaths were 1038. In 1812, 2699 were admitted, and the deaths were 1348. In the province of Archangel, the proportion of deaths has been still greater. Of 417 foundlings admitted in 1812, 377 died the same year.‡

In Palermo, during the year 1823, 597 foundlings were received at the hospital in that place, of whom 429 died.§

In the hospital at Metz, calculation showed that seven-eighths of the whole number of children perished. In an institution of this kind in one of the German principalities, only one of the foundlings, in 20 years, attained to manhood.||

“In 1751, Sir John Blaquiere stated to the House of Commons of Ireland, that of 19,420 infants admitted into the *Foundling Hospital of Dublin*, during the last ten years, 17,440 were dead or unaccounted for; and that of 2180 admitted during 1790, only 187 were then alive. In 1797, he got a committee of the same House appointed, to inquire into the state and management of that institution. They gave in their report on the 8th of May, 1797; by which it appeared, that within the quarter ending the 24th March last, 540 children were received into the hospital, of whom, in the same space of time, 450 died: that, in the last quarter, the official report of the hospital stated the deaths at three.

* Quarterly Journal of Foreign Medicine and Surgery, vol. 1, p. 188.

† Elements of Medical Statistics, by F. Bisset Hawkins, M. D. p. 136.

‡ Ib. p. 137.

§ Ibid. p. 139.

|| Beckman on Inventions, vol. 4, p. 456-7.

while the actual number was found to be 203: that, from the 25th of March to the 13th of April, nineteen days, 116 infants were admitted; of which number, there died 112. Within the last six years, there were admitted 12,786; died in that time, 12,651. So that in six years, only 135 children were saved to the public and to the world.

“In the *Charité of Berlin*, where some enjoyed the advantage of being born in the house, and of being suckled by their mothers six weeks, scarcely a fourth part survived one month.

“Every child born in the *Hotel Dieu* of Paris, was seized with a kind of malignant aphthæ, called *le muguet*, and not one survived who remained in the house.

“At *Grenoble*, of every 100 received, 25 died the first year; at *Lyons*, 36; at *Rochelle*, 50; at *Munich*, 57; and at *Montpellier*, even 60. At *Cassel*, only 10 out of 741 lived 14 years. In *Rouen*, one in 27 reached manhood; but half of these in so miserable a state, that of 108, only two could be added to the useful population. In *Vienna*, notwithstanding the princely income of the hospital, scarcely one in 19 is preserved. In *Petersburgh*, under the most admirable management and vigilant attention of the Empress Dowager, 1200 die annually out of 3650 received. In *Moscow*, with every possible advantage, out of 37,607 admitted in the course of 20 years, only 1020 were sent out.”*

The Foundling Hospital of London, exhibits rather a more favourable picture. The average of those who died there under twelve months, in ten years, was only one in six, and for the last four or five, even less in proportion.†

The general fact is, however, sufficiently evident, that the lives of the multitudes of children are sacrificed in these hospitals. The causes, too, are evident. In some instances, it arises from the want of nurses, or the mismanagement and cruelty of those that are employed; in others, from the delicacy of the infant—the want of its mother’s nourishment—the vitiation of the air—and the contagious diseases to which children are more peculiarly exposed.

But do foundling hospitals diminish the number of infanticides? We have no evidence of such a result flowing from them. From the deleterious influence which they have upon the moral feelings

* *Edinburgh Med. and Surg. Journal*, v. 1, p. 321–2.

† *Highmore’s History of the Public Charities in and near London*, p. 727. *Rees’ Cyclopaedia*, art. Hospital.

of the female sex, we cannot believe it is the case. And it is accordingly stated, that after the Foundling Institution of Cassel was established,* not a year elapsed without some children being found murdered in that place or its vicinity.†

List of British and American Cases and Trials for Infanticide.

1. *William Pizzy and Mary Codd*, tried at *Bury St. Edmunds*, 1808, for feloniously administering a certain noxious and destructive substance to *Ann Cheney*, with intent to produce miscarriage. In this case, the abortion was perfected, not by the medicine, but by the subsequent introduction of an instrument into the uterus. (1)

2. *Charles Angus*, indicted and tried at *Lancaster*, 1808, for the murder of *Margaret Burns*, of *Liverpool*. In this case, the prisoner was charged with endeavouring to procure an abortion, by means of an instrument, and also by the administration of drugs, which terminated in the death of the female. This is a most important and interesting case, well worthy of being studied. (2)

* Beckman, v. 4, p. 456.

† In relation to the general effects of foundling hospitals, a most important work has recently been announced, of which only the prospectus has yet appeared; the following notice of which I take from *Silliman's Journal of Science and the Arts*. In collecting materials for his work, the author, (M. De Gouroff, Rector of the University of St. Petersburg, Counsellor of State, &c.) has travelled over the greater part of Europe. According to this author, it is chiefly in Catholic countries that foundling hospitals are found. "Austria has many such institutions; Spain reckons 67; Tuscany, 12; Belgium, 18; but France, in this respect, excels other countries—she has no less than 362. Protestant countries, on the contrary, have suppressed the greater part of those which had been specially founded for this purpose."

To form an idea of the advantage of the protestant system over that of catholic countries, the author states, that "in London, the population of which amounts to 1,250,000, there were, in the five years from 1819 to 1823, only 151 children exposed; and that the number of illegitimate children received in the 44 work-houses of that city, of which he visited a large number in 1825, amounted, during the same period, to 4668, or 933 per annum; and that about one-fifth of these are supported at the expense of their fathers. By a striking contrast, Paris, which has but two-thirds of the population of London, enumerated, in the same five years, 25,277 enfans trouvés, all supported at the expense of the state."

To ascertain the contagious influence of these houses on the abandonment of newborn children, Mayence had no establishment of this kind, and from 1799 to 1811, there were exposed there 30 children. Napoleon, who imagined that in multiplying foundling hospitals, he would multiply soldiers and sailors, opened one in that town on the 7th November, 1811, which remained until March, 1815, when it was suppressed by the Grand Duke of Hesse-Darmstadt. During this period of three years and four months, the house received 516 foundlings. Once suppressed, as the habit of exposure had not become rooted in the people, order was again restored; and in the nine succeeding years, but seven children were exposed. (*American Journal of Science and the Arts*, vol. 17, p. 393.)

(1) *Edinburgh Medical and Surgical Journal*, vol. 6, p. 244.

(2) See *Annual Medical Register* for 1808, vol. 1, p. 143. *Edinburgh Medical and Surgical Journal*, vol. 5, p. 220. A vindication of the opinions delivered in evidence by the medical witnesses for the Crown, on a late trial at Lancaster for murder, p. 88. An able pamphlet written by John Rutter, M. D. of *Liverpool*. Paris & Fonblanque, vol. 2, p. 176. A full account of this case is also given by my brother, in the chapter on *Delivery*, in this work.

3. The case of *Phillips*, tried in January, 1811, for attempting to procure abortion in *Hannah Mary Goldsmith*, by giving savine. (3)

4. The case of *Robin Collins*, tried at Chelmsford assizes, 1820, for administering steel filings and pennyroyal water, with the intent to produce abortion. (4)

5. The case of *Margaret Tinckler*, indicted at Durham, in 1781, for the murder of *Janet Parkinson*, by having inserted wooden skewers into the uterus for the purpose of producing abortion. (5)

6. *Sarah Hill*, for infanticide. (6)

7. *Mary Eastwood*, for infanticide. (7)

8. Case in *Scotland*, for infanticide. (8)

9. *Sarah Little*, for infanticide, reported by P. J. Martin, surgeon. (9)

10. *Bease and Elliott*, infanticide. (10)

11. *Margaret Patterson*. A case of infanticide, examined and reported by David Scott, M. D. of Cupar-Fife, Scotland, accompanied with remarks by Professor Christison of Edinburgh. This is a highly interesting case, and altogether the best reported one in the English language. (11)

12. Case of alleged infanticide at Aberdeen, 1804. The child died from inability on the part of the mother to aid it after birth. (12)

13. Case of infanticide at Aylesbury, in 1668. The woman murdered her child in a state of temporary insanity, and was acquitted on that ground. (13)

14. *Mary Baker*, reported by Dr. Robinson of Bridgport, England, for infanticide. (14)

15. Case of infanticide, reported by W. Chamberlaine, surgeon in London. (15)

16. Case of infanticide, reported by Mr. F. H. Ramsbotham. (16)

17. A woman indicted and tried for infanticide, at the Sussex assizes, England, 1825. (17)

18. *Eliza Maria Jones*, for infanticide. Reported by Prof. Amos. (18)

19. A case in London of infanticide. (19)

(3) Paris and Fonblanque, vol. 3, p. 86.

(4) Ibid. vol. 3, p. 88.

(5) Paris and Fonblanque, vol. 3, p. 72. Principles of Forensic Medicine, by J. Gordon Smith, M. D. p. 326. East's Pleas of the Crown, Tit. *Murder*.

(6) Edinburgh Medical and Surgical Journal, vol. 11, p. 77.

(7) Ibid. vol. 11, p. 78.

(8) Ibid. vol. 21, p. 231.

(9) Ibid. vol. 25, p. 34.

(10) Ibid. vol. 35, p. 456.

(11) Edinburgh Medical and Surgical Journal, vol. 26, p. 62.

(12) Paris and Fonblanque, vol. 3, p. 126, taken from Burnett's Treatise on the Criminal Law of Scotland.

(13) Paris and Fonblanque, vol. 3, p. 129.

(14) London Medical Repository, vol. 22, p. 346.

(15) London Medical and Physical Journal, vol. 7, p. 283.

(16) London Medical Repository, vol. 21, p. 344. Godman's Journal of Foreign Medicine and Surgery, vol. 4, p. 532.

(17) Johnson's Medico-Chirurgical Review, vol. 9, p. 239.

(18) London Medical Gazette, vol. 10, p. 375.

(19) Lancet, vol. 9, p. 339.

20. *Susanna Powell*. Trial for infanticide at Schenectady, State of New York, in 1810. (20)

21. A trial for infanticide, October, 1831, in Jefferson county, Ohio, before the supreme court. Reported by John Andrews, M. D. (21)

22. Trial of *Hannah Hall*, for murdering her illegitimate child, in the county of Chester, Penn. in 1833. Reported by Isaac Thomas, M. D. (22)

23. Report of a trial for infanticide, with remarks. By Charles A. Lee, M. D., of New York. (23)

24. Report of a trial for murder, by the administration of oil of savine, for the purpose of procuring abortion. By Charles A. Lee, M. D. of New York. (24)

(20) Report of the trial of *Susanna*, a coloured woman, before the Hon. Ambrose Spencer, Esquire, at a court of oyer and terminer, held at Schenectady, 23d October, 1810, on a charge of having murdered her infant bastard male child. By Henry W. Warner, 1810.

(21) *American Journal of Medical Sciences*, vol. 9, p. 257.

(22) *Ibid.* vol. 13, p. 565.

(23) *Ibid.* vol. 17, p. 327.

(24) *Ibid.* vol. 21, p. 345.

CHAPTER IX.

LEGITIMACY.

1. Of the ordinary term of gestation—whether uniform or not. Causes that may produce mistakes in the reckoning of females. Variation observed among animals in the term of gestation. Causes which, it is supposed, may vary it in the human species—physiological explanations of this.
2. Premature delivery. Within what period a mature child should be deemed legitimate.
3. Protracted delivery. Remarkable cases of it in Ancient Rome, Germany, France and England. Gardner Peerage case: Opinions of distinguished accoucheurs on this subject. Cases.
4. Laws of various countries on the subject of legitimacy—Roman—Ancient French—Prussian—Modern French and Scotch laws. Decisions under these. Want of positive law in England and America. English cases. Remarks on this subject.
5. Questions relating to paternity and filiation. Paternity of children where the widow marries immediately after the death of her husband. Cases in the Roman, English and American courts. English law on this subject. Similitude and colour as evidence of paternity. Cases.

THE reproach that I have incurred of treating the present subject with levity, has induced me carefully to revise what I had written. I trust that on this point, at least, I shall not again deserve censure; but I have at the same time to avow, that on the main question, my sentiments are unaltered. The sense, however, of what is due to my readers, will prompt me to give a fair and full abstract of the facts and arguments on both sides of this interesting controversy. The following division will be pursued:

1. Of the ordinary term of gestation.
2. Of premature delivery.
3. Of protracted delivery.
4. Of the laws on the above subjects. And,
5. Of some questions relating to paternity and filiation.

I. *Of the ordinary term of gestation.*

By the common consent of mankind, the term of gestation is considered to be ten *lunar* months, or forty weeks—equal to nine *calendar* months and a week.* This period has been adopted,

* It is very important to recollect the distinction between *lunar* and *calendar* months. Some of the diversity of statement that exists, has originated from inattention to this. Nine calendar months may be from 273 to 275 days; ten lunar months are 280 days.

because general observation, in cases which allowed of accurate observation, has proved its correctness.* It is not, however, denied that differences of one or two weeks have occurred. Dr. William Hunter, in answer to a question put to him on this subject, replied, that "the usual period is nine calendar months, (thirty-nine weeks;) but there is very commonly a difference of one, two, or three weeks."†

It is important to understand why this difference occurs, or in other words, to explain on what facts the calculations of females and their medical attendants are founded. I apprehend that these have not been sufficiently considered in the discussions on this subject.

Dr. Lyall, in his publication on the Gardner Peerage case, mentions four circumstances, and probably either one or more have influence in the reckoning of almost every case. They are, 1. Certain peculiar sensations experienced by some females at the time of conception, or within a few hours, or a day, or two or more days, after the fruitful coitus. 2. The cessation of the catamenia. 3. The period of quickening. 4. A single coitus. If we review these, we shall find a certain degree of uncertainty to attach to all. There are some females who are not conscious of ever experiencing the first—the last is not applicable to married females—while the period of quickening, (as we have shown in a previous chapter,) varies sufficiently to render it perfectly nugatory, in a calculation to be made like the present.‡ There remains, then, only the cessation of the catamenia, and this indeed is the point from which most females date the period of

* Take the following case by Dr. Montgomery, as an example: "A lady who had been for some time under our care in consequence of irritable uterus, went to the seaside at Wexford in the month of June, 1831, leaving her husband in Dublin, a temporary separation being considered essential to the recovery of her health. They did not meet until the 10th of November, on which day he went to see her; and being engaged in a public office, he returned to town next day. The result of this visit was conception: before the end of the month, she began to experience some of the symptoms of pregnancy; and when she came to town on the 22d of February, she was large with child, and had quickened on the 29th of January. Her last menstruation had occurred on the 18th of October." She went on well through her pregnancy, and was delivered on the 17th of August, making exactly 280 days from the time of conception. The quickening in this case was very early, being before the completion of the twelfth week. (*Cyclopædia of Practical Medicine*, vol. 4, p. 87, art. *Succession of Inheritance*.)

† Hargrave and Butler's Note 190* to Section 188 of Coke upon Littleton.

‡ It has been suggested that the period of quickening is uniform in the same female, and that by consequence some data might thus be obtained for settling the contested point; but even this is found to be incorrect. (See page 195.)

conception. The exact time generally taken is the middle period between the last appearance of the menses and that in which they would have recurred, if pregnancy had not supervened. Some, however, calculate from the first week after the cessation.

But even this is liable to doubt and to mistake. We have mentioned that some females have bloody discharges during the early months of pregnancy, and although medical men may consider these as altogether distinct from the product of menstruation, yet the female makes no such discrimination. This, however, if ending in the birth of a child at the usual period, might lead to the belief of its being a premature case, but on the other hand, the menses may have been suppressed for one or two months previous to conception taking place, and here an opportunity is given for adducing an instance of protracted gestation.

In connexion with this, the variety that exists as to the return of the period of menstruation, may assist in leading into error. The common idea is that the menstrual discharge returns every twenty-eight days, or in other words, that there is this time "between the end of one menstrual period and the beginning of another." A practitioner of midwifery in London, in a communication to Dr. Lyall, asserts that this is a mistake—"that the twenty-eight days include both the period and the interval, and that a female who begins to be unwell on the 1st of May, will be again so on the 28th of the same month, and hence ten times in two hundred and eighty days.* Dr. Ramsbotham in his lectures on midwifery, makes a similar assertion, that these twenty-eight days are from the commencement of one period to the commencement of another.†

But even if this be granted, it is far from invariable. Dr. Davis observes, that many women menstruate at intervals of from twenty-four to twenty days, and there are some, indeed, he says, who menstruate twice a month.‡ Dr. Blundell, although he allows the greatest frequency at four weeks, speaks of periods of three weeks and some of five weeks. Mr. Robertson of Manchester, in one hundred cases taken without selection, found sixty-

* *Lancet*, vol. 10, p. 660. † *London Medical Gazette*, vol. 13, p. 269.

Dr. Hamilton observes that in the temperate climates of Europe, there are no more upon an average than twenty-three days between each menstrual period during which a woman can conceive. *Practical Observations on Midwifery*, p. 54.

‡ *Obstetric Medicine*, p. 252.

one in which the menses returned monthly, twenty-eight in three weeks, ten in intervals of varying and uncertain duration, and one, a healthy woman aged twenty-three, in whom they recurred every fortnight.*

Dr. Gall made inquiries on this point at Vienna, and found that every female had thirteen menstrual periods during the year, so that she who menstruated on the 3d of January, did so for the fourteenth time on the last day of December. He found among perfectly regular females intervals of twenty-one, twenty-five or twenty-six days.† Velpeau remarks, that sometimes only twenty-two, twenty, eighteen, or even fifteen days supervene. I know a person, says he, who is never more than twelve days free from it, whilst others are regular every thirty-second, thirty-fifth or even fortieth day.‡ Is it not possible that a female or even her medical attendant, may sometimes reckon the *missed periods* as lunar months and thus produce a protracted case?

However this may be, we have at least shown the difficulties attending a precise calculation, and explained why mistakes of two and even three weeks may sometimes occur, without affecting the leading question of a regular term of gestation.§ If in connexion with this, we take the general sense of the individuals, who are the subjects of investigation,|| and that of at least a fair

* Edinburgh Medical and Surgical Journal, vol. 38, p. 252.

† Elliotson's Blumenbach, p. 465.

‡ Velpeau's Midwifery, p. 87. "It is the opinion of most of the women of this country, that a catamenial month is a month of four weeks." This was Dr. Denman's decided opinion, and also Dr. Sims's, "than whom, perhaps, no physician of any age formed his opinions more independently of the opinions of others." (Davis' Obstetric Medicine, p. 251.)

§ Mr. Oldfield, Surgeon to the late Niger Expedition, states that the native women along the banks of the Niger, have the catamenia every three weeks, from the 17th to the 21st day; the females being in the enjoyment of perfect health. "On my expressing my surprise to a very intelligent Fundah woman, she assured me it was the usual time—that very few had them absent a moon (month): the quantity menstruated is small and continues three or four days." (London Med. and Surg. Journal, vol. 8, p. 406.)

|| I am happy to find that Dr. Anthony T. Thomson is a firm believer in a uniform period of gestation. See his lectures in London Med. and Surg. Journal, vol. 6, p. 546, 577. (I think that I have some reason to complain of Dr. Montgomery, in that he denies the correctness of this statement. In confirmation, he quotes from the report of Dr. Thomson's Lectures in the Lancet of December, 1836, published more than a year after my book issued from the press. I had only the report of Dr. Thomson's Lectures in the London Med. and Surg. Journal, and here (vol. 6, p. 546) I find the following remarks:

"I must declare to you my opinion that, except in cases in which something occurs to interrupt the regular function of the uterus, so as to produce a premature expulsion of the fetus, labour will *always* occur at two hundred and eighty days after conception. This opinion is of the most ancient date.")

proportion of the intelligent and scientific members of the profession particularly conversant in midwifery, we shall find that the prevailing opinion in nearly all countries, is in favour of the above-mentioned regular period.

There are, however, physiologists who doubt this uniformity and advance various arguments against it.

The first, and in my view the most important, is drawn from the variety observed in the gestation of animals. The ancients, it appears, were aware of this and noticed it in their writings. But the individual who has paid the greatest attention to it is M. Tessier. In a memoir presented to the National Institute, he states, that he has been forty years occupied with it, and kept a register of the facts. Out of 160 cows, fourteen calved from eight months to eight months and twenty-six days, 3 at 270 days, 50 from 270 to 280 days, 68 from 280 to 290 days, 20 at 300, and 5 at 308 days; the extremes were thus 67 days. Of 102 mares observed, 3 foaled on the 311th day, 1 on the 314th, 1 on the 325th, 1 on the 326th, 1 on the 330th, 47 from 340 to 350 days, 25 from 350 to 360, 21 from 360 to 377, and 1 on the 394th day; the extremes being 83 days. With sows, the extremes were 15 days; and with rabbits, (139 observed,) 7 days, varying from 26 to 33 days.*

These facts certainly go to show that the period of gestation is irregular among animals; and should they be verified by succeeding observers, a strong argument from analogy will be furnished against its uniformity in the human race. It must, however, be recollected, that even if perfectly established, it is only a favourable, and not a decisive proof.†

But there are causes assigned, by which it is alleged that the ordinary term of gestation may be varied.

Changes in the constitution of the atmosphere. These, it is supposed, sometimes exert an important effect on the uterus. The

* Repertory of Arts, 1st series, vol. 12, p. 140. This contains a translation of Tessier's Memoir. My former quotations were altogether incorrect, having been copied from Cooper's Tracts.

† It is to be regretted that this subject has not been more noticed. I have frequently asked farmers concerning it, and most of them have asserted that the period is very regular. They are not, however, in the habit of making memoranda. I was furnished with the following by one of my pupils at the Western Medical College, Dr. Seth L. Andrews. In seven instances, where his father, the Rev. E. D. Andrews of Pittsford, noticed the period of gestation in cows, the result was as follows:—40 weeks, 3 days; 40 weeks, 4 days; 40 weeks, 5 days; 41 weeks, 3 days; 40 weeks, 6 days; 40 weeks, 3 days; 40 weeks, 5 days; the extremes thus varying only seven days.

authority of Hippocrates is cited, affirming that a warm winter, accompanied with rains and south winds, and succeeded by a cold and dry spring, causes abortions very readily in females who are to be delivered in the spring. Many physicians are said to have verified this observation in later times; and Foderé himself observes, that at Martigues, in 1806, after a warm winter, an epidemic catarrh broke out, and all the pregnant women miscarried.

The constitution and habits of the female, it is believed, vary it. That part of the sex which reside in cities, and lead effeminate lives, are more liable to variations than others differently situated. The nervous system also may be so affected as to cause similar changes.

The womb may at one time be irritable, and at other times passive; and in this way, the ordinary term will not prove constant.*

I will barely remark on these arguments, that experience has refuted, and is constantly refuting them. There is not a practitioner in midwifery who has not, within his own observation, met with cases sufficient to contradict the opinions just advanced.† It frequently happens that females of the most irritable habits and effeminate course of life, proceed to the ordinary period—nay it almost universally is so; and although some may be delivered at the thirty-seventh or thirty-eighth week, yet if gestation be completed much sooner, the size of the child, or the dangers attendant on premature birth, are generally sufficient to prove the nature of the case. As to the effect of epidemic constitutions, it will be observed, that this cannot with fairness be used as a general argument; nor indeed, does it prove any thing more, than that the state of the weather may be such as to pre dispose to abortion.

To all this, however, the *argumentum ad hominem* is rejoined, and cases are adduced which certainly appear difficult of explanation, unless we allow that gestation may be protracted. I shall

* These arguments are taken from Foderé, a believer in protracted gestation, (vol. 2, chap. 8.) Merat suggests that the tardy or rapid development of the neck of the womb may be the cause of the variety that occurs, and the former again to disease, hardness of its fibres, etc. (Dictionnaire des Sciences Médicales, vol. 18, p. 327, art. *Naissances tardives*.)

† The fact that dead children and twins are born at the regular period, is certainly a strong proof of there being a fixed term of gestation.

notice some of these in a subsequent section, and will now mention the theory promulgated by Dr. Power of London, (a believer in protracted gestation,) in explanation of its supposed occurrence. How far it is to be considered as perfectly original, will be seen by referring to my preceding remarks.

Dr. Power recurs first to the change that takes place in the state of the womb during the progress of pregnancy. The neck disappears; the fœtus presses on the mouth, in consequence of the insensible contraction that is going on; and when labour commences, there is "orificial irritation," increased by the large quantity of nerves going to that part. Whatever then will prevent the contents of the womb from irritating its mouth, or interfere with the due application of its insensible contraction, may not only delay labour, but *delay its commencement* beyond the usual time. He adduces cases illustrative of this, in some of which, pressure alone appears to have been sufficient, after considerable delay in the natural state, to bring on the phenomena of labour; in others, it has been postponed in consequence of an oblique or improper situation of the mouth of the womb.*

The most rational explanation (provided the possibility of protracted gestation be conceded) that I have yet met with, is contained in the following extract: "why should pregnancy be more exempt from variation than other physiological conditions? Do the teeth appear at a definite period? The regular interval between the catamenial efforts is four weeks; but how often is this varied, sometimes by disease, sometimes by idiosyncrasy. The fortieth week is the natural period for the termination of pregnancy and any departure from it is unnatural, but only in the sense that would apply to tardy or premature menstruation. It is urged moreover that the human fœtus, like the young of the inferior classes, is not expelled from the womb till it has acquired a developement adapted to extra-uterine existence; that disease and other causes may delay this developement, and consequently

* See Dr. Power's pamphlet on this subject, "An Attempt, etc." quoted in the catalogue of books consulted, and also his evidence on the Gardner peerage case. Dr. Lyall pertinently asks (p. 84) why, if this theory be true, does not labour always come on gradually; since the stimulant (orificial irritation) is not applied suddenly, but progressively? Dr. Ramsbotham has recently, in his lectures on midwifery, suggested in explanation of the difference in human gestation, that there are various periods which elapse during the passage of the ovum through the fallopian tube. He refers, in illustration of this, to John Hunter's case, (Transactions of a Society, vol. 2,) where no fœtus could be detected at four weeks, and Sir E. Home's case, where it was seen at one week. (London Medical Gazette, vol. 13, p. 553.)

that there is no reason for astonishment if parturition be sometimes retarded.”*

II. *Of premature delivery.*

The question which requires consideration under this section, is whether a child with all the characters of maturity, as we have described them in a previous chapter, can be born before the ordinary term of gestation? And its direct bearing is on the subject of legitimacy. A husband, for example, has been absent from his family, and at the end of seven or eight months after his return, a full grown healthy child is produced. Is the honour of the family to be impeached, or shall we allow that this variation is possible?

There is an intrinsic difficulty connected with this question, which should lead us to be tender in forming our opinions, and this originates from the variety observed in children when born at the full time. They differ in size, general appearance, healthiness, &c.; and sometimes, indeed, we know that eight months' children have been observed larger and healthier than those of nine months. The general appearance, then, should be noticed, but not too much relied on, in forming an unfavourable opinion.

It is an unquestionable fact, that there is in many females a disposition to expel the child before the ordinary term. This not only takes place at the thirty-seventh or thirty-eighth week, when we might suppose that the female had made a mistake in her calculation, but occurs as soon as the seventh month. La Motte, in his *Midwifery*, mentions of two females who always brought forth at seven months. Van Swieten says he has observed similar cases, and Foderé relates of a female in the duchy of Aost in the same situation.† It will not, however, be contended that these are to be considered as indicating a healthy and regular state of the uterine function, but rather as a consequence of disease.

If the question be confined in the manner already stated, we may derive aid from the appearance of the child, and the condition of the mother; and although it may be deemed *barely* possi-

* British and Foreign Med. Review, vol. 2, p. 404. Devergie, vol. 1, p. 468. I doubt whether the thorough-going advocates for protracted gestation will agree in full to the above. There is too much concession as to its being an unnatural occurrence.

† Foderé, vol. 2, p. 128.

ble that a child born at seven months may *occasionally* be of such a size as to be considered mature, yet I apprehend that the assertion is most frequently made by those whose character is in danger of being destroyed.

If a mature child (mature not only as to size, but also as to other characters already enumerated as indicative of perfect developement,*) be born before seven full months after the alleged connexion, it ought certainly to be considered as illegitimate.†

III. *Of protracted delivery.*

I propose to devote this section to a statement of some cases that have occurred at various times, and that have been made the subject of legal investigation, and also to a notice of the opinions of distinguished accoucheurs.

One of the oldest cases on record, is mentioned by Pliny the naturalist. He states, that the Prætor, L. Papirius, declared a child born at thirteen months, legitimate, on the ground that there was no certain period for the completion of gestation. The emperor Adrian, at a subsequent period, as we are informed by Aulus Gellius, declared an infant legitimate, which was born eleven months after the death of its father, on account of the unsuspected and undoubted virtue of the widow. A similar case is mentioned by Godefroy, in his *Notes on the Novels of Justinian*. A widow was delivered fourteen months after the death of her husband, and her issue pronounced legitimate by the parliament of Paris. It appeared that she had lived with the relatives of her husband during the whole period of widowhood; that they had never observed any impropriety in her conduct; and they also testified to the deep and constant grief she had manifested for the loss of her partner. The parliament of Paris appears indeed to have adjudicated on numerous cases of protracted

* See page 280.

† Dr. Montgomery will not allow even this, and states that he never saw a child, avowedly of six or seven months growth, that presented an appearance even remotely resembling that of a full grown and matured fœtus. (*Cyclopædia of Practical Medicine*, vol. 4, p. 87, Art. *Succession*.)

Valentini, however, quotes a decision which is very different. The husband had been absent a year, but returned home on the 14th of April, 1656; and on the succeeding 26th of September, (five months and twelve days,) his wife was delivered of a living child. The Medical Faculty of Leipsic decided that it was legitimate, because the mother had laboured under grief and terror during her pregnancy, and because, at her delivery, she was so weak as to need bathing with wine. (*Pandects*, vol. 1, p. 86.)

gestation. Foderé gives an abstract of twelve, which I copy to show the reasons assigned.*

Thomas Bartholin relates of a young girl at Leipsic, who, on accusing a person of having seduced her, was confined and strictly guarded. At the end of sixteen months, she brought forth a child, which lived two days.†

In 1638, a female brought forth a child one year and thirteen days after the death of her husband. She suffered with severe labour pains during the whole of the previous month, and the parietal bones of the infant, at birth, were found to be united—no fontanelle being present. It was also added, that she had always been irregular in her calculations with the seven she had previously borne. The opinion of the Medical Faculty of Leipsic was required in this case. They replied, that extraordinary cases of protracted gestation, deserving of credit, were related by many authors; that there might be a frigidity of the genital organs, so as to cause a slow increase of the fœtus; and that the long continuance of the labour pains proved this to be a præternatural case. They therefore decided that the offspring was legitimate.‡

* Foderé, vol. 2, p. 111 to 115. In 1578, a child born eleven months after the departure of the husband, was declared legitimate, because the husband might have returned during the interval.

In 1626, a child born eleven months after the death of the husband, was adjudged a bastard, on account of the bad character of the mother.

In 1653, a child born eleven months and three days after the death of the husband, was adjudged legitimate.

In 1632, a child born within four days of ten months after the death of the husband, was pronounced a bastard, on account of the character of the mother, and the constant ill health of the putative father.

In 1649, a child born at ten months and nine days, was adjudged legitimate, though the father had been absent and paralytic.

In 1656, a child born at sixteen months after the death of the husband, was declared a bastard.

In 1664, a child born eleven months after the absence of the husband, was adjudged legitimate, from the possibility that he might have had connexion during the interval.

In 1695, a child born at eleven months, declared legitimate, for the same reason.

In 1705, in the case of a child born twelve months and six days after the disappearance of the husband, an interlocutory judgment was pronounced, as some asserted that he was dead, while the female asserted that she saw him nine months previous to delivery.

In 1756, a child born within six days of a year after the death of the husband, declared a bastard. So also with one born at eleven months and seven days.

In December, 1779, a child born at eleven months and one day after the husband's death, was pronounced legitimate, on account of the irreproachable conduct of the mother.

† Foderé, vol. 2. p. 183.

‡ Valentini's Pandects, vol. 1, p. 142. In another case, where the child was born eleven months after the death of the husband, the Medical Faculty of Leipsic, on the

In another instance, a man named Gans, after being deemed *in extremis* for eight days, died on the 2d December, 1687; and on the 25th of the succeeding October, his wife was delivered of a son. The brothers and sisters of the deceased contested its legitimacy, and an appeal was made to the Medical Faculty of Giessen. They commence their answer, also, by stating extraordinary cases as mentioned by authors, and in this instance decided in favour of its being the child of Gans, because he was weak and feeble at the period of conception, and the mother was of a *frigid complexion*; the fœtus, therefore, would require a longer period to come to maturity.*

There are also some cases which deserve notice, from the medical controversies to which they have given origin. I shall particularly mention two that occurred in France.

Le Sueur, a resident of the city of Caudebec in Normandy, was struck with apoplexy on the 14th of May, 1771, and died on the 16th. His wife, Maria Rose, had not been pregnant during the six years of their marriage. On the 11th of the succeeding September, she declared herself pregnant; and on the 17th of April, 1772, (eleven months and one day after his death, and eleven months and four days after his illness,) she was delivered of a son. The relatives of the husband contested its legitimacy, and obtained a decree in their favour; but on appealing to the parliament of Rouen, the cause was, in December, 1779, decided in favour of the widow. Her claim was defended on the score of character, and on the possibility of protracted gestation. The former seemed to be most unexceptionable, at least the public opinion was strongly in her favour, and the latter was supported by many extraordinary narratives. The work of the celebrated Petit on this subject was quoted, in which he states that many faculties of medicine, forty-seven celebrated authors, and twenty-three French physicians and surgeons, agree in believing that delivery may be delayed to the eleventh and twelfth month; nay, that it is perfectly demonstrated that this frequently occurs.

Among the quotations from the work of Petit, is the following

2d of April, 1630, declared it illegitimate, because it was born beyond the time assigned by Hippocrates. (Ibid. vol. 1, p. 140.) Amman, who reports these cases, observes, that he cannot reconcile the conflicting decisions, except by saying that the first of these children would become very rich by the decision, while the other was poor.

* Valentini's Pandects, vol. 1, p. 144,

case related by Heister. A female, the wife of a bookseller, in Wolfenbittel, was delivered thirteen months after the death of her husband. The individuals interested, proposed to contest the legitimacy of the infant, but were deterred on account of her excellent character. So convinced was one Christopher Misnerus, who had acted as shopkeeper during her widowhood, of her virtue and probity, that he married her shortly after, and had two children by her, and each of them was born after a gestation of thirteen months.*

Tracy, a naval physician, deposed in this case, that he knew a female who was delivered at the end of fourteen months. She was in delicate health, and both she and her husband informed him, that there had been no connexion since the commencement of her pregnancy.

Dulignac, *chirurgien major* to the regiment of Asfeld, testified, that with three children which his wife had produced, the term in two had been thirteen and a half months, and in the third eleven months; and that he had recognized the existence of each of the pregnancies at four months and a half, by the most infallible sign—the motion of the child.

Lepecq de la Cloture also gave an opinion in favour of the widow, and quoted similar cases from his own observation. This author dwelt much upon the inertness which grief produces on the uterine organs, and conceived that the languor which sorrow causes, may retard the progress of gestation.†

The following enlisted all the medical talent of France in its discussion. Charles —, aged upwards of seventy-two years, married Renée, aged about thirty years, at the commencement of the year 1759. They were married nearly four years without having any issue. On the 7th of October, 1762, he was taken ill with fever and violent oppression, which remained until his death. The last symptom was so severe, that he was forced to sit in his bed; nor could he move without assistance. In addition to these, he was seized with a dry gangrene of the leg on the 21st; and with this accumulation of disease, he gradually sunk, and died on the 17th of November, aged 76 years. Renée had not slept in the chamber during his illness; but about three and a

* This case is related at length, with all its proofs, in Schlegel, vol. 2, p. 99 to 113. (Wagner's Dissertation.)

† Foderé, vol. 2, p. 185 to 189, quoted from the *Causes Célèbres*.

half months after his death, she suggested that she was pregnant; and on the 3d of October, 1763, (within four days of a year since the illness of her husband, and ten months and seventeen days after his death,) she was delivered of a healthy, well formed, and full sized child. The opinion of Louis was asked on this case, and he declared that the offspring was illegitimate. Had he rested at this, even the advocates of protracted gestation might probably not have murmured, as the circumstances were rather too powerful for the interposition of their favourite doctrines. But he took occasion, in his consultation, to attack the opinion generally, and to deny the possibility of the occurrence of such cases. Among the arguments which he adduces, are the following: that the laws of nature on this subject are immutable; that the fœtus, at a fixed period, has received all the nourishment of which it is susceptible from the mother, and becomes, as it were, a foreign body; that married females are very liable to error in their calculations; that the decision of tribunals in favour of protracted gestation, cannot overturn a physical law; and finally, that the virtue of females in these cases, is a very uncertain guide for legal decisions. "If we admit," says he, "all the facts reported by ancient and modern authors, of delivery from eleven to twenty-three months, it will be very commodious for females; and if so great a latitude is allowed for the production of posthumous heirs, the collateral ones may in all cases abandon their hopes unless sterility be actually present."*

This reasoning appears to me to carry great weight, and Mahon, in his chapter on this subject, adds several sensible remarks in confirmation of it. He observes, that if the doctrine be true that the children of old people are longer in coming to maturity, it would have been confirmed by experience, which it is not. Grief also, and the depressing passions, are much relied upon as possessing a delaying power; but certainly these are more apt to produce abortion, than protracted gestation. He accounts for the mistakes of married women, by suggesting that the menses may be suppressed, not only from disease, but from affections of the mind, or accidental causes, which do not immediately impair the health; while the increase of volume in the abdomen may originate from this, or from numerous other causes. Towards

* Louis' *Memoire contre légitimité des naissances prétendues tardives*. Le Bas attacked this Memoir, and Louis replied in a supplement. Several other physicians, I believe, took part in the controversy.

the conclusion of his remarks, he states a difficulty, which, I believe, cannot be readily overcome. If the doctrine be allowed, how shall we distinguish a delayed child from one that is born at nine months; and by what means are we to detect fraud in such cases? Certainly, as far as we can judge from the narratives given, the infants born after protracted gestation were not distinguished for size, or other appearances of maturity.*

The above cases would be incomplete, were I not to add to them one that recently came before the House of Lords in England, and in its progress excited the greatest interest.

The Hon. Alan Hyde (afterwards Lord) Gardner, a captain in the British navy, was married to Miss Adderly, at Fort St. George in the East Indies, in 1796. On the 8th of December, 1802, Mrs. Gardner bore a child, which appeared to be the fruit of an illicit intercourse between her and Henry Jadis. An action for criminal conversation was instituted by Lord Gardner against Mr. Jadis, in the Court of King's Bench, and he obtained a verdict of £1000 damages. He then procured a sentence of divorce in the Consistory Court of the Bishop of London, and the marriage was formally dissolved. Mr. Jadis married Mrs. Gardner in 1805; and the child just alluded to, was acknowledged as their offspring, and took the name of Henry Fenton Jadis, which he bore until the commencement of the present suit, when he assumed that of Henry Fenton Gardner, and claimed, through his guardians, to be the rightful heir to the title and estates of the now deceased Lord Gardner. This nobleman had married a second time, with the Hon. Miss Smith, daughter of Lord Carrington, on the 10th of April, 1809; and a son, Alan Legge Gardner, also a claimant of the peerage and estates, was born on the 29th of January, 1810. Lord Gardner died in London, January 5, 1816.

The following were the facts on which the claim of Henry Fenton Jadis was founded: "In 1802, Lord Gardner, who was then captain of the ship *Resolution*, arrived off Portsmouth, and was joined by his first wife, who remained on board with him about three weeks, and then took her departure for London on the 30th of January. It appears, however, that the *Resolution* did not sail till the 7th of February, and that some communica-

* Mahon, vol. 1, pp. 183, 185, 198, 203.

tion took place between the ship and the shore by means of boats. Lord Gardner sailed for the West Indies, and returned home on the 11th of July, in the same year."

On these, the following questions came up before the committee of the House of Lords. Could a child, born on the 8th of December, have been the result of sexual intercourse, either on the 30th of January or anterior to it, being in the first case 311 days? Or could a child, born as above, have been the result of intercourse on the 7th of February, being 304 days? Or lastly, could a child thus born and living to manhood, have been the result of intercourse on or after the 11th of July, being a period two or three days short of five calendar months? The last was not much discussed, and the medical testimony was principally confined to the others, making it thus a question of protracted gestation.

Seventeen medical gentlemen, some of them the most distinguished accoucheurs in London, were examined. I shall arrange their testimony with reference to their belief, or disbelief, in the doctrine under investigation.

Drs. Gooch and Ralph Blegborough, Sir Charles M. Clarke, Dr. D. D. Davis, Professor of Midwifery in the London University, and Mr. R. P. Pennington may be considered as not crediting it.

Dr. Gooch, considered the usual period of gestation, where it could be accurately calculated, to be nine calendar months, (39 weeks,) as from the 25th of May to the 25th of December. When the statement of Dr. William Hunter was urged to him, that he (Dr. Hunter) "had *known* a woman bear a living child in a perfectly natural way, fourteen days later than nine calendar months, and *believed* two women to have been delivered of a child alive in the natural way, above ten calendar months from the time of conception,"* Dr. G. professed the highest respect for the character and talents of Dr. Hunter, but entertained doubts as to the accuracy of these cases—he should like to know the grounds on which the opinions were formed, and how far they depended on the testimony of the females. He stated that he had been for many years physician to two Lying-in Hospitals. In one of these, there are two wards kept for single women, "so

* This answer is taken from Hargrave and Butler's Note to Coke upon Littleton, as already quoted.

that cases frequently occurred, in which I had an opportunity of calculating accurately the length of pregnancy." Young females, he added, in very respectable situations, are often seduced; the *intercourse is single, and there is no motive whatever for mistating the fact.* It would appear, that Dr. Gooch relied much for his opinion on these cases, and did not believe that the obvious objection to such testimony, (viz. that the confession of more numerous connexions would give a suspicion of general incontinence,) would lie in the instances which he had seen.*

Dr. Blegborough had been in practice in London 34 years. He considered thirty-nine weeks as the period of gestation, and forty as the greatest extent. Mechanical obstructions, as from malconformation, might delay birth for five or six days; but in that case, it is uniformly attended with hazard either to mother or child, or both. He had grounded his calculations on the peculiar sensations experienced by females. They have fainted, and have been extremely ill, so as to induce their friends to send for a professional man. On proper inquiry, they will declare certain sensations, by which we know that conception has taken place, and was the cause of the feelings experienced. Upon calculating from that time, he had, in such instances, invariably found that he had been right in his surmises, and that labour had taken place certainly not later, in any instance, than forty weeks from that period. Dr. B., however, conceded, that these sensations do not necessarily follow immediately upon sexual intercourse, but said that they did so frequently.

Dr. Davis considered nine calendar months as the period of gestation, and he inclined to a day, or two days, short of that period, rather than beyond it. He had met with a few cases in which patients had reckoned from a single coitus, and in all these, birth took place at the 39th week. "I cannot say exactly on what day"—but some at its conclusion, and others within it.

Sir Charles M. Clarke considered forty weeks as the full period. He observed, in answer to various questions, that he never knew a case in which fatigue and exhaustion had caused

* In his *Midwifery*, p. 135, Dr. Gooch remarks,—“In general, impregnation takes place a day or two after the last menstrual period. I reckon nine calendar months. If a lady says she was taken unwell on the 17th of June; and continued so four days, I add one more, and from this (the 22d) I reckon nine calendar months, viz. the 22d of March, and in a large majority of cases, I am right.” He adds, however, that pregnancy may occur at any time during the period, and thus cause some variation.

protracted gestation. He could understand that they may accelerate, but could not see how they could retard. In several instances, (twenty at least,) that had come under his observation, the fact of the last intercourse had been stated to him by the parties themselves, and on this he had founded his calculations. In no case had the forty weeks been exceeded.

If the calculation be founded on the suppression of menses, he deemed that the safest mode would be to calculate, from its middle period ; i. e., fourteen days from the last menstruation.

Mr. R. R. Pennington had been an accoucheur 37 years, and had never known gestation protracted beyond three or four days after forty weeks, and forty weeks is the usual term. He formed his opinion from the time of conception, and this again from circumstances mentioned by the females.

It will thus be seen, that of the five witnesses that disbelieved in protracted gestation, three founded their calculations on the occurrence of a single coitus, and the remainder on peculiar sensations experienced. They differ in their terms, thus :

Dr. Gooch says 39 weeks, or 271 to 277 days :

Dr. Blegborough, 39 to 40 weeks, 273 to 280 days :

Dr. Davis, 39 weeks, 271 to 273 days :

Sir C. M. Clarke, 40 weeks, 280 days :

Mr. Pennington, 40 weeks, 280 to 283 days.

On the other side, the following medical witnesses gave testimony : Drs. A. B. Granville, Conquest, Blundell, Merriman, Power, Hopkins, Dennison, H. Davis and Elliotson, and Messrs. Sabine, Chinnocks, and Hawkes.

Dr. Granville gave it as his opinion, that the *usual* or *ordinary* period of gestation is comprised between the 265th day, subsequent to impregnation, and the 280th, or 40 weeks ; but he believed that gestation might be protracted. The most prominent case mentioned by him in proof of this, was that of his own wife. She passed her menstrual period on the 7th of April, and on the 15th of August afterwards, she quickened. Labour was expected in the early part of January, and accordingly pains came on ; but they again subsided, and she was not delivered until February 7th ; that is, 306 days, if we reckon from the day before the next expected menstruation, or 318 days, if from the middle of the two periods.

Dr. G. also stated, that he was attached to two of the most

extensive Lying-in Institutions in London ; had seen much practice in them, and had particularly and carefully registered cases, taking all the leading circumstances of their history from the individuals admitted, on presenting their letters of recommendation. According to these registers, he had "known a case of 285 days from the latest period of supposed impregnation ; taking as the point of departure, the last day of the month previous to the missed period, that is, say 28 or 30 days after the last menstruation : also cases of 290, 300 and 315 (but this Dr. Granville afterwards stated that he considered a case of 310) days."

In answer to the question, whether he believed it possible, that a child should be begotten on the 30th of January, and born at an interval of 311 days, viz. on the 7th or 8th of December, he said, *I am aware of no circumstance that can render it impossible.*

I should also add, that an inquiry was attempted in some of his registered cases, but technical difficulties were interposed, and on the whole, they were not satisfactory, even one where a female was examined in *propria persona*.*

Dr. Conquest had practised for thirteen years, and although the majority of cases are completed within the ninth calendar month, yet he certainly had met with instances which far exceeded that date. In not fewer than twenty cases, there had been very confident assertions on the part of the women, that they had exceeded the time ; and in two or three instances he had taken great pains to satisfy himself, and was very sure of it. In one female, who was so certain of being confined at the anticipated time, that she had her nurse in the house ; the period was exceeded nearly *five* weeks. This female had borne six children.

* Dr. Granville afterward resumed the discussion of this subject at the Westminster Medical Society, in December, 1829. He stated, that the cases to which he had referred, were capable of the most satisfactory proof, and ought not to have been rejected or trifled with on the examination. In several instances, the reckoning had been made from the last day of the lunar month immediately succeeding the last appearance of the menses, and which then extended severally to 292, 298, 299, 302, 313, 317, and 324 days. "A lady whom he had attended this year, living with her husband, and who had never, when not pregnant, been irregular in her menses, calculated her pregnancy from midway between the 28 days, which elapsed between her previous menstruation, and the period when she ought to have menstruated again ; and she then fixed upon the conclusion of ten calendar months for the day of her confinement. She proved perfectly correct ; and on inquiring the reason for fixing on so protracted a period, she said that her three former children were born after a similar interval. Even supposing the conception to have taken place at the very end of the first lunar period, still the protraction must have extended two weeks at the least." (Lancet, N. S. vol. 5, p. 418.)

“At that time (says Dr. Conquest) I disbelieved all the cases I had previously heard; I had been in the habit of laughing at them as a public lecturer; but so strong was the evidence, from the most minute investigation of this case, that I was compelled to admit the accuracy of this woman’s statement, and my former convictions were very much shaken.” It is remarkable, that at her subsequent confinement, this female again exceeded her calculation by four weeks.

In another instance, a lady who had borne nine children, and had been able five times to determine exactly the day on which she should be confined, exceeded the time by a month and two days. She brought forth the largest child Dr. Conquest had ever seen, after a very protracted labour.

On inquiring as to the probable causes of protracted gestation. Dr. Conquest stated, that he had seen instances in which an occasional loss of blood during pregnancy appeared to interfere with the process. Mental emotions will also protract the period. He believed that eleven months had been exceeded.

On cross-examination, Dr. Conquest stated, that his calculation as to the time of birth, was founded on the time of *quickening*. He deemed this much more certain than that from menstruation. Quickening takes place from the 16th to the 20th week; but when a woman has quickened at a certain time, then, he believed, with scarcely an exception, she invariably quickens at the same period afterwards.*

Now, in the females mentioned by him, the first had quickened with six children exactly at the termination of the sixteenth week, reckoning from the non-appearance of the menstrual discharge, and the period when she supposed herself to become pregnant. “This woman is an excessively irritable woman, physically and mentally; and she affirms most confidently, that she invariably suffers much constitutional disturbance within one week after impregnation, and that the acts of intercourse are so seldom with her husband, that she has in every case been able to date with

* This opinion of Dr. Conquest requires confirmation. I have already quoted a case by Dr. Montgomery, in which there was a striking variation, (Page 195) and may now add his opinion, that the time of quickening will in the majority of cases, be found to vary in the same person in successive pregnancies. (Signs of Pregnancy, p. 86.) Dr. Hamilton also remarks that Dr. Conquest has stated the exception, not the general rule. (Practical Observations, p. 55.)

correctness, with the exception of the two (protracted) cases, and then she took the same data as the ground of her opinion."

In the second case, the opinion was deduced from the absence of menstruation and quickening. She quickened at the seventeenth week, and twenty-eight weeks from that to birth made forty-five weeks.

Dr. Conquest was asked whether he had known a woman menstruate during pregnancy. He replied, "I think a woman does not menstruate, in the common acceptation of the term. I know a woman will lose blood periodically, but I believe these are all cases in which the extremities of certain arteries terminate below the uterus, in the upper parts of the vagina; and I believe, that in by far the majority of cases of reported menstruation, if the discharge is examined by one or two tests, it will be found to be blood, and not the menstrual secretion, which differs materially from blood."

Dr. Blundell had personally known but one case in which pregnancy was prolonged beyond nine calendar months. This female became pregnant on the 9th of August, and was delivered on the 23d of May, (287 days.) Dr. Blundell saw her a few days after impregnation—there were symptoms of irritation about the bladder and adjacent parts, and the catamenia were absent. He had no doubt that these symptoms arose from impregnation.

This witness professed himself a believer in protracted gestation, from this case—from the observations of Tessier on brutes, showing that it actually occurs with them, and the observations of others on the human subject.

Dr. Merriman had practised midwifery for thirty years. The ordinary period of gestation is about forty weeks; but in his own experience, he had known cases to exceed this—some 285 days, some 287, two or three 296, one 303, and one 309 days. The last was of a lady who had borne six or seven children. "She always calculated her reckoning from the last day on which her monthly period ceased. On this occasion she was perfectly well on the 7th of March; and from some circumstance, which I did not press to know, she said she supposed herself to have conceived on the 8th of March." This lady was delivered on the 11th of January, being 309 days.

On cross-examination, Dr. Merriman was asked how he had

calculated his protracted cases. He answered, "*From the time at which the last appearance of the menstruation ceased; from the termination of the monthly period.*" In the last case, the female had menstruated on the 7th of March; and both females were married, and lived with their husbands. It was very properly asked, whether the intercourse which produced conception, might not have been at any time previous to the next period; and if so, whether, allowing it only to have occurred in the middle between the two menstruations, most of the cases would not be brought to the usual term of forty weeks, while the rest might be referred to it by admitting the opinion that pregnancy took place just before the expected menstrual period? Deduct 28 days from 309, and the result exceeds forty weeks by only *one day*. Dr. Merriman readily allowed the correctness of all these inferences. He threw out an idea, that impregnation is by no means so common the day before the expected term of menstruation, as it is the day after the menstruation has ceased.*

* Dr. Merriman, at a period subsequent to the above trial, published his observations in detail. They are contained in the *Medico-Chirurgical Transactions*, vol. 13, p. 338; and the following abstract from his paper deserves insertion here.

"When I have been requested (says he) to calculate the time at which the accession of labour might be expected, I have been very exact in ascertaining the last day on which any appearance of the catamenia was distinguishable, and have reckoned forty weeks from this day, assuming that the 280th was to be considered as the legitimate day of parturition. The subjoined table shows how often this day was deviated from, and what was the actual number of days from the day of menstrual intermission to the birth of the child."

A Table of the births of 114 mature children, calculated from, but not including, the day on which the catamenia were last distinguishable.

At 255 days, 1		At 262 days, 2
256 - 1		263 - 2
259 - 1		264 - 4
—		265 - 1
3 in 37th week.		266 - 4
		—
		13 in 38th week.
At 267 days, 1	At 274 days, 4	At 281 days, 5
268 - 1	275 - 2	282 - 2
269 - 4	276 - 4	283 - 6
270 - 1	277 - 8	284 - 1
271 - 2	278 - 3	285 - 4
272 - 2	279 - 3	286 - 3
273 - 3	280 - 9	287 - 1
—	—	—
14 in 39th week.	33 in 40th week.	22 in 41st week.
At 288 days, 5	At 295 days, 1	At 303 days, 1
289 - 2	296 - 2	305 - 1
290 - 2	297 - 2	306 - 2
292 - 4	298 - 4	—
293 - 2	301 - 1	4 in 44th week.
—	—	—
15 in 42d week.	10 in 43d week.	

Dr. Power had practised midwifery for thirteen years. He was decidedly of opinion that gestation may be extended to eleven calendar months, if not longer. He had met with from thirty to fifty cases in which it exceeded the ordinary term, and some in which it went to the period just named. His opinion is deduced from the statements of the females as to the period of menstruation and the time of quickening, and also from physiological reasoning, an account of which I have already given.

Drs. Hopkins, Dennison, and H. Davis were believers in protracted gestation, but their examinations did not elicit any very positive facts.

Dr. Elliotson had, at a former period, delivered lectures on Forensic Medicine in London; and the result of his examination for this purpose, of works by eminent men on the point in question, led him to believe it possible.

Mr. Sabine spoke of the case of his own wife. Her last menstruation was on the 14th of September; she quickened in the second week of January, and was delivered on the 14th of August; being a ten months' case, if we date from the 14th of October; or ten months and a half, if from the middle of the period.

Mr. Chinnocks related the case of a female who exceeded her calculation eighteen days, but the particulars were not sufficiently investigated.

Lastly, Mr. Hawkes, an accoucheur from Oakhampton, in De-

From this table, Dr. Merriman thinks it fair to infer that conception is effected more commonly soon after the catamenial period has intermitted, than immediately before the recurrence of that discharge. On a few occasions, he observes, the period of delivery, dated from the last appearance of the catamenia, has exceeded 44 weeks, or 308 days. The first is the case mentioned in the text. The lady has, in ten pregnancies, borne eleven children; and on all these occasions, became pregnant almost immediately after the monthly discharge. In addition to the facts stated above, he observes that the child was larger than most of her former ones, and the labour was longer. In reply to the objections made on his examination, he urges that she was correct in reckoning from this datum in all her former pregnancies, and again in a succeeding one.

Another was that of Mrs. N. who was unwell in November, 1822. She recovered on the 15th, and had no subsequent appearance. Her labour took place on the 5th of October, 323 days from the day of intermission.

A third was a female aged upwards of forty, who had not borne a child for more than nine years. She was unwell for the last time in March, 1823. She hoped from this that she had passed the critical period; but shortly after, she began to enlarge in size. As this increased, it was feared that ovarian disease might be present. Dr. Merriman, however, on examination at a period when the catamenia had not recurred for twelve months, found her pregnant. She was safely delivered on the 27th of September, 1824.

vonshire, spoke of some cases of 41 and 42 weeks, but no definite facts were given by him. He, however, advanced an idea, that pregnancy continued longer with males than females; assigning 280 days for the latter, and 290 for the former. But, said the Solicitor General, suppose the child is an *hermaphrodite*—what then is the time? He answered, “*that I should take between the two.*”

Several females were also examined as to their own experience on this subject, but the result was not definite or satisfactory.

Such was the medical testimony in the famous Gardner peerage case. I need scarcely add, that it was little heeded in the decision—that was founded on the well established adultery of the mother of Jadis; and the son of Lord Gardner by Miss Smith, obtained the peerage.*

Sir John S. Copley, Attorney-General, (now Lord Lyndhurst,) who appeared for the crown, and whose speech was therefore in the nature of a judgment, made the following remarks on the medical evidence. “The witnesses on both sides state that 280 days is the extreme of the usual time of gestation. This is not confined to the witnesses on the part of the claimant; every witness on the other side states that the extreme of the usual and natural time, according to the ordinary course of nature, is 280 days. But then it is said, there may be exceptions; prodigies may happen. Be it so, then it is incumbent upon those who contend for the exceptions to make them out. The onus is on the side of those who say there are exceptions. The proof must be such as to exclude any reasonable doubts. These prodigies will not be believed on secondary evidence, and when these pretended cases of exception are examined, it will be seen that there is nothing established in them satisfactory, nay, which ought to be the ground of action in a case so important as the present.” (Le Marchant, p. 303.)

I have to a certain degree anticipated the concluding purpose of this section, viz. to present the opinions of distinguished ac-

* For the details of this case, I am indebted to Dr. Lyall's “Medical Evidence relative to the duration of human pregnancy, as given in the Gardner peerage case,” first and second editions, and to Le Marchant's report of the proceedings of the House of Lords on the claims to the Barony of Gardner. London, 1828. (In the State Library.) See also Cyclopædia of Practical Medicine, art. *Succession*. The medical student will find remarks on this testimony in the Edinburgh Medical and Surgical Journal, vol. 27, p. 109; and Medico-Chirurgical Review, vol. 9, p. 170.

coucheurs. It would, however, be incomplete, were I not to add some more of these, and for a reason which must probably ere this have occurred to the reader. Many of the cases now enumerated, have the stamp of adultery on them. It is in vain to urge such as conclusive in favour of protracted gestation. I come now to some which appear unexceptionable in this respect.

The first I shall quote, is from Dr. Dewees of Philadelphia. "The husband of a lady, absent seven months in consequence of embarrassments, returned clandestinely one night; and his visit was known only to his wife, his mother, and Dr. Dewees. She was within one week of her menstrual period, which was not interrupted, but the next one was. In nine months and thirteen days (forty-one weeks) from the date of the visit, she was delivered of a healthy child."*

In a subsequent edition, he observes, "I have had every evidence this side of absolute proof, that it has been prolonged to ten calendar months, as an habitual arrangement in at least four females; that is, each went one month longer than the calculations made from an allowance of ten or twelve days after the cessation of the last menstrual period, and from the quickening, which was fixed at four months. Besides, a case within a short time has occurred in this city, where the lady was not delivered for full ten months, after the departure of her husband for Europe; yet so well and so justly too did this lady stand in public estimation, that there did not attach the slightest suspicion of a sinister cause."†

* Dewees' Midwifery, p. 170. If February be included in the above mentioned term, it will be 283 days; if not, 285 or 286 days.

† Dewees' Midwifery, p. 130, third edition. I must be pardoned in asserting, that the case adduced by Prof. Dewees, from the fourteenth volume of the New-England Journal of Medicine, is not applicable to the present subject. The female became pregnant April 1, 1822; suffered much from sickness, and died undelivered, May 1824. On dissection, the uterus was found diseased—bearing marks of inflammation, and a full grown fetus was discovered. If we thus bring in the agency of disease, we at once decide the question, and all reasoning on the healthy state of the parts, and the consequences *naturally* resulting, is at an end.

Cases somewhat resembling the above, are mentioned by Mr. Cullen, of a female who bore her child thirteen months from the time of her last menstruation; when delivered, it measured between nine and ten inches, and weighed six ounces. (London Medical Gazette, 1829.) Also by Dr. Homans of Boston, of a female who supposed herself pregnant in September, 1827; had all its symptoms for several months, but between the sixth and seventh, there was a great diminution of size, which continued until the ninth month. At this time she had regular labour pains, which continued for twenty-four hours, when they ceased, and she returned to her usual occupations. In September, 1828, she was seized with uterine hæmorrhage and la-

Professor Desormeaux gives the following case as occurring in a patient whom he attended. "A lady, the mother of three children, became deranged after a severe fever. Her physician thought that pregnancy might have a beneficial effect on the mental disease, and permitted her husband to visit her, but with this restriction, that there should be an interval of three months *between each visit*; in order that, if conception took place, the risk of abortion from further intercourse might be avoided. The physician and attendants made an exact note of the time when the husband's visit took place. As soon as symptoms of pregnancy began to appear, the visits were discontinued. The lady was closely watched all the time by her female attendants. She was delivered at the end of nine calendar months and a fortnight, and Desormeaux attended her.*

Dr. Hamilton, Professor at Edinburgh, says, "In one case, many years ago, the lady exceeded the tenth revolution of the menstrual period, by twelve days; another lady exceeded it by sixteen, and another by twenty-four days. The latter menstruated on the 1st of August, and was not delivered until the 28th of June. Another lady, the mother of a large family, exceeded her period by above a fortnight, on the 4th of March, when her husband went to England, where he resided for some months; but she was not delivered till the 6th of December."

Professor Burns observes, "On the other hand, it is equally certain, that some causes which we cannot explain or discover, *have the power of retarding the process*, the woman carrying the child longer than nine months, and the child when born being not larger than the average size. How long it is possible for labour to be delayed beyond the usual time, cannot be easily determined. The longest term I have met with, is ten calendar months and ten days, dated from the last menstruation. In the case of one lady who went this length, her regular menstrual period was five weeks; and in her other pregnancies, she was confined exactly two days before the expiration of ten calendar months after menstruation."†

hour pains; and a fœtus, one and a half inch long, with a placenta, was expelled. (Boston Medical and Surgical Journal, vol. 2, p. 372.)

* Dr. Granville in *Lancet*, N. S. vol. 5, p. 418.

† Quoted in *Cyclopedia of Practical Medicine*, art. *Succession*, vol. 4, p. 90. Dr. Hamilton thinks, "that if the character of the woman be unexceptionable, a favourable report should be given for the mother, though the child should not be produced

Velpau knew a woman who computed that she was four months gone when she came to his amphitheatre. He distinctly felt both the active and passive motions of the fœtus. Appearances of labour took place at the end of the ninth month, but they were soon suspended, and did not return for thirty days. She then languished a whole week, before she was delivered; so that, in fact, this took place on the 310th day.*

Some other striking cases might be added to the above, but enough, I presume, have been given.

To the long list already noticed, of believers in the doctrine of protracted gestation, must be joined the names of Haller, Zachias, Petit, Harvey, Mauriceau, Smellie, and a host of what may, by distinction, be called the elder writers. Among the physicians of our own day, may be mentioned the names of Foderé, Capuron, Richerand, Osiander, Sprengel, Adelon, Orfila, Madame Boivin, Ryan, Montgomery, and Campbell.†

till near ten calendar months after the death or sudden absence of the husband. He used to say in his lectures, that in his own practice, he never knew a woman to exceed the eleventh menstrual period." Note by Dr. Lyall, in his *Gardner Peerage Case*, p. 43.

We have now the published opinion of Dr. Hamilton. In his "*Practical Observations on subjects relating to Midwifery*" the following remark occurs. "I am quite certain that the term allowed by the Code Napoleon, viz. 300 days, is too limited," and he is inclined to regard ten calendar months, which he believes to be the established usage of the Consistorial Court of Scotland, as a good general rule. Page 59.

* Velpau's *Midwifery*, p. 246.

† Those who wish to examine this subject further, are referred, in addition to the authorities already quoted, to Foderé, Metzger, Louis, Valentini, Schurigius' *Dissertation in Schlegel*, vol. 4, p. 232. Dr. Montgomery's cases occurring under his own observation—one protracted to 291 days and the other probably longer, are given in his *Signs of Pregnancy*, p. 275, &c.

According to Dr. Michaelis of Kiel, protracted gestation was *epidemic* in the Lying-in Institution of that city for the year ending July, 1818. Of 64 cases, there were 19 in which the pregnancy exceeded 300 days; 13, over 290 days; 19, in which it exceeded 280 days; 10, in which it was between 260 and 280 days; and 3 in which it was less than 260. The average of all these is 289 days. *Dunglison's Medical Intelligence*, vol. 1, p. 296.

Among individual cases, I may mention Dr. Collins', at Liverpool, in 1824, which he considered an eleven months' pregnancy—founded on the last appearance of the menses, but particularly on an examination of the os uteri, which he found, at what she called her eighth month, with difficulty distinguishable from the body of the uterus. At the end of the ninth, it was in some degree open, flat, and stretched. She had repeated pains, but these went away, and she was not delivered until two months after. She had been greatly distressed during her pregnancy, and Dr. Collins is disposed to ascribe much to this cause. (*Edinburgh Medical and Surgical Journal*, vol. 25, p. 145.) There are, however, some doubts as to the precise length of this gestation. (See Lyall, and *Medico-Chirurgical Review*, vol. 9, p. 212.) Also a case by P. C. Blackett, (*London Medical and Surgical Journal*), of a female, who, in the beginning of December, 1820, was seized with retchings and sickness in the morning, vertigo, pain and tension in the breasts. During four successive pregnancies, she had a regular monthly discharge, and in about two weeks after the above retchings, she had this again, and it continued monthly, until she was confined. She ex-

IV. *Of the laws of various countries on the subject of legitimacy.*

The Roman law did not consider an infant legitimate, which was born later than ten months after the death of the father, or the dissolution of the marriage.* Such was also the French law prior to the Revolution.

In 1634, a case was decided by a majority of the judges of the supreme court of Friesland, by which a child was admitted to the succession, though not born till three hundred and thirty-three days from the husband's death, and what increases the latitude of the decision, is that the husband was for some time a valetudinarian, and for fourteen days before his death, confined to his bed.†

The Prussian civil code declares that an infant born three hundred and two days after the death of the husband, shall be considered legitimate, and a case has occurred, where one born three hundred and forty-three days after the death of the husband, was adjudged a bastard by the *legislative commission* of that country.‡

The civil code now in force in France contains the following provisions. The child born in wedlock has the husband for its

pected this in September, 1821, but no signs of labour appeared. In October she was seized with pain in the region of the liver; and during the use of remedies, experienced motion for the first time. On the 23d of December, 1821, she was delivered of two male infants, with separate placentæ, and each weighed about eight pounds. (Boston Medical and Surgical Journal, vol. 9, p. 153.) By Dr. Ryan, of a female who menstruated the last week in February, 1826, quickened in July, but instead of being delivered in November, had spurious pains through it and the two succeeding months. The child was not born until February 28, 1827. (Medical Jurisprudence, p. 146.) Dr. Campbell in his Midwifery, states that he has seen protracted cases, 11, 13 and 18 days, beyond nine calendar months. He adds, that the oftener an individual is impregnated, the more likely is the gestation to be prolonged. "In females who are pregnant for the first time, gestation seldom exceeds nine months more than a week." p. 71.

In opposition to the above examples, I add the following, recently reported by Professor M'Keen, of Bowdoin College. He was consulted in a case of retroversion of the uterus, of the most obstinate nature. It had probably occurred nearly a year previous to his visit. After a patient and well managed application of means, the complaint was in a great degree removed. During all this time, she had been at Topsham, the residence of Professor M'Keen, eight miles from her home. She now wrote for her husband, and on Saturday the 31st of May, he arrived, and she returned with him in the afternoon. On the 23d of February succeeding, (8 calendar months and 24 days, or 270 days,) she was safely delivered of a son. (Boston Medical and Surgical Journal, vol. 12, p. 264.

* Foderé, vol. 2, p. 111.

† Hargrave ut antea. This case is quoted from Johannes à Sandes' (himself a senator of the court,) Collection of Adjudications made by it. In Paris and Fonblanque, vol. 3, p. 216, the case, including the arguments and authorities adduced even at that time, in favour of protracted gestation, is given in the original Latin.

‡ Metzger, p. 427, 429.

father. He may, however, disavow it, if he can prove, that from the three hundredth to the one hundredth and eightieth day before its birth, he was prevented either by absence or some physical impossibility, from cohabiting with his wife. An infant born before one hundred and eighty days after marriage, cannot be disavowed by him in the following cases. 1. When he had knowledge of his wife's pregnancy before marriage. 2. When he assisted at the act of birth, and signed a declaration of it. 3. When the infant is declared not capable of living. Lastly, the legitimacy of an infant born three hundred days after the dissolution of the marriage, may be contested.*

It will be observed, that by the last section, the child born after three hundred days, is not positively declared a bastard, but *its legitimacy may be contested*. And Capuron in remarking on this, observes, that it would probably be deemed legitimate, if no legal investigation should take place.†

The following case was adjudicated under its provisions :

Catherine Berard was married on the 25th of July, 1806, to François Chappellet, who, about six months after, was seized with a pleurisy, and languishing with it about eight days, died on the 20th of January, 1807. On the 3d of December of the same year, and three hundred and sixteen days after his death, she was delivered of a child, of which she declared the deceased Chappellet the father. An application was made to the court at Chambéry for the property to which this birth entitled her, and it was resisted by the relatives of the husband, on the ground of illegitimacy. She pleaded their cruel usage during her widowhood, the state of poverty and sorrow to which she was reduced by their treatment, and the fact, that at the expiration of nine months, she had experienced labour pains, which continued until the middle of the tenth—as explanatory of this protracted gestation. The court, after quoting the article in question from the Napoleon code, argued that it gave the child a *provisionary* legitimacy, until the contrary was proved by concurring facts and circumstances. They further observed that the term of gestation in this case, did not exceed that allowed by many celebrated physicians, as possible ; and remarked that the widow must have been in a state of sorrow and languor, in consequence of the

* Code civil, sections 312, 314, 315, quoted by Capuron and Foderé. † Page 231.

treatment of her relatives, and thus the increase of the fœtus was probably retarded. Accordingly, on the 14th April, 1808, a decree was pronounced, declaring the child legitimate. An appeal was taken from it to the court of appeals at Grenoble. M. Métral, the advocate for the mother, advanced in his pleadings most of the arguments which we have already noticed—such as the variety in the period of gestation, quoted numerous cases from medical authors, and urged the decisions of the French courts as precedents in the present instance. The modesty and good conduct of the mother were not forgotten, nor the fact, that she had experienced labour pains at the end of nine months. The court in their *arrêt textuel*, observe, that as the 315th article of the Napoleon code declares, that the legitimacy of the child born three hundred days after the dissolution of marriage may be contested, it by implication destroys its claim in a disputed case, and affixes a term beyond which, gestations are to be deemed illegitimate. Again, the 228th and 296th articles of the same code, forbid a widow or divorced female to marry, until ten months after the dissolution of marriage. Here again the term of three hundred days appears to be pointed out as the most extensive period allowed to pregnancy. The father, also, by the 312th article, is permitted to disavow the child, if he proves a physical impossibility of cohabiting with his wife for ten months previous. The court contend, that the contesting of the legitimacy on the part of the relatives, is equivalent to a disavowal on the part of the putative father, and conclude with remarking, that any extension beyond the term of three hundred days, must prove dangerous to morals, and the repose of families. They therefore declared the child in question illegitimate.*

The Scotch law is concise and decisive. "To fix bastardy on a child, the husband's absence must continue till within six lunar months of the birth, and a child born after the tenth month is accounted a bastard."†

I am enabled to add some cases illustrative of its administra-

* *Causes Célèbres* par Maurice Mejan, vol. 6, p. 93 to 120.

† Erskine's *Institutes of the Laws of Scotland*, quoted in the *Edinburgh Medical and Surgical Journal*, vol. 1, p. 334. Dr. Campbell (*Midwifery*, p. 71,) disapproves of the first part. "The latter period I conceive to be no more than just, but the former certainly affords too great a latitude. There is not a well authenticated case on record, of a child being reared, when born in the middle of the seventh month, far less the conclusion of the sixth. I think six months and three weeks is the earliest period that ought to be admitted."

tion. James Sandy was married to Margaret Bain on the 14th of March, 1819, and died on the 3d of April thereafter. Bain was delivered of a child on the morning of the 1st of February, 1820, being nine calendar months and 29 days from the death of Sandy. The brother of the deceased took possession of the property, and an action was brought against him by the tutor of the child. Lord Meadowbank, as Lord Ordinary, reported in favour of the brother, on the ground that lunar months were meant in the civil law, and consequently in the law of Scotland. A different opinion was entertained by Lord Gillies, who found "that the lapse of 9 calendar months and 29 days, is not sufficient *per se* to overturn the presumption of the child's legitimacy." It was, however, urged, that Sandy had from an early period of life, been confined to bed; that he was incapable of procreation, and that Bain was a woman of immoral habits. The Court allowed proof of these allegations, "on advising which, they waived the general point, and in respect of the evidence, assailed the defenders" (found for the defendant).*

In the case of *Stewart v. McKeand*, (Court of Session Decisions, August 1774,) the prosecutor must have gone eleven months, or it is impossible that the defender could be the father. The court, after stating that the period being thus fixed and ascertained, repudiated the idea of the climate of Scotland, as had been urged by counsel, having the effect of protracting the term of gestation beyond nine months. No Scottish lawyer ever carried the term of legitimacy beyond ten months.†

In another instance, the husband had been in the West Indies since 1822, and on the 6th of December, 1824, the wife was delivered of a child, of which she alleged one Robertson to be the father. According to his own statement, he arrived at Perth on the 30th of April, 1824, and "about a month afterwards or so," had connexion with the female. This was about six months and six days before the birth of the child, and he offered to prove that it was full grown. But the court held, that the legal presumption was, that he had connexion on the day of his arrival, and the interval was then eight lunar months, excepting four days. The vagueness of his plea, with the oath of the mother,

* *Sandy v. Sandy*. Cases in the Court of Session. Vol. 2, p. 406.

† *Le Marchant*, Report of the Gardner Peerage Case, Appendix. p. 337.

induced a decision that he should support the child. The proof that the child was full grown at birth was refused.*

The English law, on which our own is founded, does not prescribe a precise time. There are, however, some decisions, which will show the ordinary course of adjudication. In the eighteenth year of Edward the first, Beatrice, the wife of Robert Radwell, was delivered of a son, eleven days after forty weeks. The husband had been seriously ill, and had no access to his wife for one month before his death. The child was *presumed* to be a bastard, and judgment was given accordingly. Gilbert De Clare, Earl of Gloucester, died on the 30th of June of the 7th of Edward the Second, and on the 29th of January of the 9th year, (within one day of a year and seven months,) his sisters and co-heirs prayed livery. The countess pled that she was big with the earl, which was accordingly found *per inquisitionem*. The question hung in deliberation, nor did they obtain livery till the 10th of Edward. In another case, during the 18th year of Richard II. Andrews, the husband died of the plague. His wife, who was a lewd woman, was delivered of a child forty weeks and ten days after the death of the husband. Yet the child was adjudged legitimate and heir to Andrews, for *partus potest protrahi ten days ex accidente*.†

These, I believe, are all the cases on record, until that of *Foster and others v. Cook*, tried in the English Court of Chancery. Henry Cook died on the 14th of January, 1780, and on the 9th of November, 1780, following, (forty-three weeks except one day,) his widow was delivered of a son. A trial was held, and the jury found this posthumous child to be the heir-at-law.‡

It is evident, however, from the remarks of Lord Eldon on the Gardner Peerage Case, (Le Marchant, p. 286,) that this case ought not to have been reported as a valid decision of an English Court of Law in favour of a period so protracted. "The ver-

* *Robertson v. Petrie*. Cases in the Court of Session. Vol. 4, p. 338.

† These cases are taken from Hargrave's and Butler's Notes on Coke upon Littleton. (Note 190, on sect. 188.) There is a more full report of the case of Andrews, in Croke Jac. p. 541. It is stated, that "the husband's father abused her, and caused her to lie in the streets; and three physicians (two of them doctors of physic) made out that the child came in time convenient to be the child of the dead party; and that it is usual for a woman to go nine months and ten days, i. e. solar months at 30 days, and not lunar months. And that by reason of want of strength in the woman or child, or from ill usage, she might be a longer time, viz. to the end of ten days or more. And the physicians further affirmed, that a perfect birth may be at seven months." This case is also reported under the title of *Alsop v. Bowtrell* or *Boutram*, and I rather think, also under that of *Alsop v. Stacey*.

‡ *Brown's Chancery Cases*, vol. 3, p. 349.

dict was a matter of indifference, except so far as it identified a necessary party."

Within a few years, the Gardner Peerage Case, and the following, are all that I can find mentioned in the English law books,

"In the 'Observer,' Sunday newspaper, for September 9, 1827. a trial for seduction, *Anderton v. Whitaker*, is reported. The following evidence is stated to have been given by the female: 'It was on the 8th of January, that I had the intimacy with the defendant, but never had any before or since.' The child was born on the 18th of October,—284 days from the time of conception."*

I have already mentioned, that like the English, we have no law on this subject, and I can find no American cases, that have been adjudicated, except one, which probably belongs most properly to the next section, and is there given.†

Messrs. Hargrave and Butler, in commenting on the early English cases, observe, that "these precedents, so far from corroborating Lord Coke's limitation of the *ultimum tempus pariendi* (forty weeks) do, upon the whole, rather tend to show, that it hath been the practice in our courts to consider forty weeks merely as the more *usual* time, and consequently not to decline exercising a discretion of allowing a longer space, where the opinion of physicians or the circumstances of the case have so required."‡ If then a contested case should ever arise in our courts, the opinion of medical men must be brought forward to decide it. What that opinion is, my readers have seen in the present and former sections. A majority of writers, at least, are believers in protracted gestation.§

* Dr. Merriman, in *Medico-Chirurgical Transactions*, vol. 13, p. 640.

† In a former edition, I stated that cases of protracted gestation are rarely heard of in England and America, and that they appear to have occurred most frequently in countries where the administration of justice was arbitrary, or at least fickle and unsteady. I observe that Dr. Graves contradicts this, (*New York Medical Journal*, vol. 2, p. 135,) so far as it relates to this country. It may be so, but I was not aware of it.

‡ Blackstone, however, intimates, that a child born after forty weeks, is illegitimate. He cites Britton for this; but the co-editors remark, that even this writer seems to extend it in some degree beyond forty weeks.

§ I have already mentioned the punishment for rape in Egypt, under the present Pacha. It is taken from a Communication on the present state of Legal Medicine in Egypt, by M. Hamont, Director of the School of Veterinary Medicine, at Abou-Zabel, and addressed (March, 1833,) to Dr. Leuret. The following is what he says on our present subject. "A man is absent one, two, three or four years, and on his return finds his wife pregnant, or children born to him during that time. He accuses her of infidelity; she denies it. The cause is brought before the tribunals. The judges, after hearing both sides, and weighing the merits of the case, gravely decide, that children may continue four years in the womb of the mother. *Après cinq ans, il n'en est plus ainsi.*" (*Annales D'Hygiène*, vol. 10, p. 204.)

And now I may be permitted to inquire, whether it is intended to give this belief its full force and application? Is it intended, that in a case, tainted with the suspicion of adultery, nay its certainty, a child shall be legitimated, although born eleven months after absence or sudden death? Will physicians, like Dr. Granville, in the Gardner case, tell the court, that they see nothing impossible in this? If so, and the knowledge of this opinion extends among the community, where will be the security of succession? Or even waiving this, what must be its effects when generally understood, on public morals?

Being in the minority, I am not authorized to propose any positive rules. I may, however, quote some remarks from believers in this doctrine, that deserve every consideration.

“At the same time, we must add, that the cases which to us appear to carry with them the fullest demonstration of their truth, are those in which the ordinary term was not exceeded by more than three or four weeks.”*

“If the possibility or probability of its being prolonged, is conceded; it does not follow, that, in actual practice, judgment should go upon the *general probability* of the event, as a fact in physiology. On the contrary, since in the abstract, more disorder would be occasioned in society, by admitting the general principle as adequate to decide special cases, than by rejecting it altogether, we conceive that if a definite period is not fixed by law, proof of the special probability, or improbability, should be required in each case.”†

If these opinions are acted upon, it may prove a happy circumstance, that we have no laws on the subject. Juries will generally dispose justly in suspicious cases.

V. *Of some questions relating to paternity and filiation.*

These form a proper supplement to the present chapter, from their connexion with its leading subject.

It might be supposed that common decency, as well as a proper respect for the opinions of mankind, would prevent those sudden marriages which sometimes take place immediately after the death of a former husband. There have, however, been females

* Montgomery, in *Cyclopedia of Practical Medicine*, art. Succession.

† *Edinburgh Medical and Surgical Journal*, vol. 27, p. 114. The whole of the article from which this extract is taken, is well worthy of an attentive perusal. It is a review of the evidence in the Gardner case.

in all countries, who have disregarded these restraints, and united themselves to a second partner before the "first brief week of mourning is expired." Besides the injury that such cases produce on the public manners, there is a difficulty which may arise in a legal view. *She may be delivered of a child at the expiration of ten months from the death of the first husband*; and the question then occurs as to the paternity of the infant.

The Romans endeavoured to prevent this, by forbidding the widow to marry until after the expiration of ten months; and this term was prolonged by the emperors Gratian and Valentinian, to twelve. This law has been imitated in the present French code, which also forbids the marriage before ten full months have elapsed since the dissolution of the previous one.*

But if these laws are transgressed, or if there be no laws, (as in England and our own country) against such precipitate connexions, whom shall we declare to be the father of the child? I will answer this, by citing some cases, and then mentioning the laws in force respecting it.

About the period when the plague broke out in Naples, one Antoine, aged forty, married Jeronime, a young lady, and on the second day after, died of that fatal disease. Aniello, a relative and intimate friend of the widow, having obtained the necessary dispensation, married her immediately afterwards. She was delivered of a child two hundred and seventy-three days after the consummation of the marriage with Antoine, and two hundred and sixty-eight after her union with Aniello—being in the one case, thirty-nine weeks, and in the other, thirty-eight. The question, *who was the father of this child?* was put to Zacchias.

In order to solve the difficulty, he canvassed the condition of the two husbands, the mother, and the child. Antoine, he observes, was of a feeble constitution, and his marriage was a forced one, and contrary to the wishes of the female, who was attached to Aniello. The latter was strong and robust. The wife stated that the consummation of the first marriage was attended with a discharge of blood, which she attributed to menstruation—that in the interval of her widowhood, it had slightly returned, but

* Fodere, vol. 2, p. 205. "The same constitution," says Blackstone, "was probably handed down to our early ancestors from the Romans, during their stay in this island, for we find it established under the Saxon and Danish governments. *Sit omnis vidua sine marito duodecim menses.*" (Blackstone, vol. 1, p. 457.) It was the law before the conquest.

never after the second marriage. Now, from this, it might be supposed, that as menstruation had not returned regularly since the first marriage, the pregnancy was caused by Antoine. Zacchias, however, supposes that the sanguineous discharge was the consequence of defloration, and that as she received the advances of her first husband with disgust, the suppression might arise from mental uneasiness. He attaches no importance to the fact, that if the child was the son of the second husband, the period of pregnancy would fall short of nine months, and thinks it sufficiently counterbalanced by the youth of the parties. He therefore decided, that it was the child of Aniello.*

In another case, a widow married shortly after the husband's death, and in the fifth month of her second marriage, was delivered of a son, who survived. He was baptized by the name of the second husband, and when he arrived of age, claimed to be acknowledged as his son, and to be supported accordingly. The tribunal of the Rota, after taking the advice of physicians and lawyers on the subject, decided that he was not the offspring of the second marriage, on the ground that a five months' birth was not *viable*, or could not have survived.†

There are also some English cases on record. In the 18th of Richard the Second, a woman, immediately after the death of the first husband, took a second, and had issue born forty weeks and eleven days after the death of the first husband. It was held to be the issue of the second husband. In another instance, "Thecar marries a lewd woman, but she doth not cohabit with him, and is suspected of incontinency with Duncomb. Thecar dies—Duncomb within three weeks of his death marries her, and two hundred and eighty-one days and sixteen hours after his death, she is delivered of a son. Here it was agreed, 1. If she had not married Duncomb, without question the issue should not be a bastard, but should be adjudged the son of Thecar. 2. No averment shall be received that Thecar did not cohabit with his wife. 3. Though it is possible, that the son might be begotten after the husband's death, yet being a question of fact, it was tried by a jury, and the son was found to be the issue of Thecar.‡

* Zacchias, Consilium, No. 73. See also No. 75, for a somewhat similar case.

† Zacchias, Decisiones Sacræ Rotæ Romanæ, No. 45.

‡ Hargrave's notes, *ut antea*. See, also, Croke Jac. p. 686, for an account of the same case.

The English law on this subject is thus explained by Blackstone and Coke. "If a man dies and his widow soon after marries again, and a child is born within such a time, as that by the course of nature it might have been the child of either husband, in this case, he is said to be more than ordinarily legitimate, for he may, when he arrives at years of discretion, choose which of the fathers he pleases."*

The following is the only American case that I have been able to find.

Michael Redlion, by his last will and testament, bequeathed to his son Christian, a considerable sum of money, the issues of which were to be paid to him during life, and at his death, the principal to go to his children; but if he died without lawful issue, then the same was to go to the other children of the said Michael. Christian was married to Catharine Stout in the spring of 1825, and died on the 1st of November, 1825. His widow Catharine married to Thomas Woolverton, the defendant, on the 16th of March, 1826, and on the 14th of Sept. 1826, the said Catharine had a son born, who is now living. The question for the jury was, who was the father, the first or the second husband? Christian Redlion committed suicide, and from his death to the birth of the child was ten months and fourteen days, and from the marriage of Woolverton to the birth of the child, six months. The plaintiffs were brothers of the deceased, and entitled to the above principal in case of his dying without issue. The court charged the jury in favour of the plaintiffs and against the child, and the jury brought in a verdict accordingly.†

It has also been suggested, that the resemblance of the child to the supposed father, might aid in deciding these doubtful cases.‡ This, however, is a very uncertain source of reliance. We daily observe the most striking difference in physical traits between the parent and the child; while individuals, born in different quarters of the globe, have been mistaken for each other.

* Blackstone, vol. 1, p. 456. Hargrave, as already quoted, and also in note 7 to fol. 8. a, intimates a doubt respecting the above doctrine, and suggests that one of the cases quoted would lead to the opinion, that "*the circumstances of the case, instead of the choice of the issue, should determine who is the father.*" This certainly would seem to be the most correct mode of adjudicating.

† John and Jacob Redlion v. Woolverton. Hazard's Register of Pennsylvania, vol. 7, p. 363, June 4, 1831.

‡ See Zacchias, vol. 1, p. 146; and Valentini's Pandects, vol. 1, p. 148. *De Similitudine Natorum cum Parentibus.*

And even as to malconformations, although some most remarkable resemblances in this respect have been noticed between father and child, yet we should act unwisely in relying too much on them.* There is, however, a circumstance connected with this, which, when present, should certainly defeat the presumption that the husband or the paramour is the father of the child; and that is, "when the appearance of the child evidently proves that its father must have been of a different race from the husband (or paramour,) as when a mulatto is born of a white woman whose husband is also white, or of a black woman whose husband is a negro."† It was on this principle that a curious case was decided in New York some years since.

Lucy Williams, a mulatto woman, was delivered, on the 23d of January, 1807, of a female bastard child, which became a public charge. On examination according to our laws, she stated that Alexander Whistelo, a black man, was the father of it; and he was accordingly apprehended, for the purpose of obtaining from him the necessary indemnity for its expenses. Several physicians were summoned before the police justices, who gave it as their opinion that it was not his child, but the offspring of a white man. Dr. Mitchill, however, thought it possible, nay probable, that Whistelo was the father. In consequence of this diversity of opinion, the case was brought up for trial before the mayor, recorder and several aldermen, on the 18th of August, 1808. It appeared in evidence, that the colour of the child was somewhat dark, but lighter than the generality of mulattoes: and that its hair was straight, and had none of the peculiarities of the negro race. Many of the most eminent members of the medical profession were examined, and they all, with the exception of Dr. Mitchill, declared that its appearance contradicted the idea that it was the child of a black man. Dr. Mitchill, for

* "Dr. Gregory, in his lectures, used to relate to his class, in order to convince them of the resemblance which so generally exists between parents and children, that having been once called to a distant part of Scotland, to visit a rich nobleman, he discovered, in the configuration of his nose, an exact resemblance to that of the Grand Chancellor of Scotland in the reign of Charles the First, as represented in his portraits. On taking a walk through the village after dinner, the doctor recognized the same form of nose in several individuals among the country people; and the nobleman's steward, who accompanied him, informed him that all the persons he had seen were descended from the bastards of the Grand Chancellor." (Paris and Fonblanque's Medical Jurisprudence, vol. 1, p. 220.)

† Edinburgh Medical and Surgical Journal, vol. 1, p. 335.

various reasons, (for which I refer to the account of the trial,) placed great faith in the oath of the female, and persisted in his belief of its paternity, although he allowed that its appearance was an anomaly. The mayor, (the Hon. De Witt Clinton,) and the court decided in favour of Whistelo.*

In a case before Chancellor Walworth, in 1835, a man had been arrested on the oath of a female, that he was the father of her bastard child, and being unable to give bail, consented to marry her. It was now urged, in order to annul the marriage contract, that the defendant had been delivered at the time of making the oath, of a *negro* child, both parties in the suit being white persons. The Chancellor said, that if she knew at the time when she charged the complainant that it was a black child, he would consider it in the light of a fraud, and annul the marriage; and directed the master to take testimony on the subject accordingly.†

It will not do, however, to extend this rule too positively with what may be called *mixed breeds*.

Parsons gives an account, in the Philosophical Transactions, of a black man married to an Englishwoman, of whom the offspring was quite black. In a similar case, the child resembled the mother in fairness of features; and indeed the whole skin was white, except some spots on the thigh, which were as black as the father.

White, in his work on the *Gradation of Man*, mentions a negro who had twins by an Englishman: One was perfectly black, its hair short, woolly and curled; the other was white, with hair resembling that of an European.

So, also, Dr. Winterbottom knew a family of six persons, one half of which was almost as light-coloured as mulattoes, while

* See a pamphlet, entitled "The commissioners of the Alms-House v. Alexander Whistelo, a black man; being a remarkable case of bastardy, tried and adjudged by the mayor, recorder, and several aldermen of the city of New York, etc." New York, 1808. The main scope of Dr. Mitchell's argument appears to have been, that as alteration of complexion has occasionally been noticed in the human subject, (as of negroes turning partially white,) and in animals, so this might be a parallel instance.

† Dr. Mitchell's opinion on Whistelo's case, does not seem entitled to much greater estimation than that of a poor Irish woman in a recent London police report, who ascribed the fact of her having brought forth a thick-lipped, woolly-headed urchin, to her having eaten some black potatoes during her pregnancy." (Dunglison's *Physiology*, vol. 2, p. 316.)

† 5 Paige's Chancery Reports, 43. *Scott v. Shufeldt*.

the other was jet black. The father was a deep black, the mother a mulatto.*

“The offspring of a black and white,” says Lawrence, “may be either black or white, instead of being mixed; and in some rare cases it has been spotted.”

* Edinburgh Encyclopædia, art. *Complexion*. Lawrence's Lectures, p. 259.

It may be well also to refer, in this place, to the changes of colour that take place in the new-born black infant. At birth, it sometimes cannot be distinguished from the white; its hair has not yet its peculiar make, and we can only notice the tendency to dark on some parts of the body. In a few days, however, the change commences on the countenance, and gradually extends over the body. Cassan (*On Superfætation*, p. 56,) has well remarked, that these successive changes may prove very useful, when a dead black child has been found, in deciding how long it has lived.

CHAPTER X.

PRESUMPTION OF SURVIVORSHIP.

1. Of the survivorship of the mother or child, when both die during delivery. Cases that have been decided in Germany—in France—in the State of New York. 2. Of the presumption of survivorship of persons of different ages, destroyed by a common accident. Laws on this subject—Roman—Ancient French—Napoleon code—English. Cases that have occurred under each—General Stanwix—Taylor—Selwyn. Propriety of having fixed laws on this subject. Difficulty in settling presumptions.

This interesting as well as intricate question, has frequently been the subject of legal inquiry. It is agitated when two or more individuals have died within a very short period of each other, and no witnesses have been present to notice the exact instant of dissolution. Accidents also, such as fire, or a shipwreck, may destroy persons, and the disposition of their property will depend on ascertaining the survivorship of the one or the other. It is not to be supposed that medical science can solve the difficulty; but it may, in those extreme instances, where no aid can be derived from facts, assist in laying down certain principles. I shall endeavour to suggest some of these, while relating such cases as I have been enabled to obtain. They may serve as a guide for future investigations.

The subject will be advantageously considered, 1. As to the survivorship of the mother or child, when both die during delivery; and 2. As to the survivorship of persons of different ages, destroyed by a common accident. This last may seem to include the first; but the distinction which I wish to make, will be readily understood.

I. Of the presumption of survivorship of mother or child, when both die during delivery.

The Imperial Chamber of Wetzlar were consulted, at the conclusion of the seventeenth century, concerning the case of a mother and child, who, some years previous, had both died during delivery. There were no facts on which an opinion could be founded, and the naked question was presented. They de-

cided, for *physical reasons*, that the mother had died first; and the commentator, in noticing this case, remarks, that undoubtedly these physical reasons were, 1, that the mother was exhausted by the labour; and 2, that the infant would not have died, until deprived, by the death of the mother, of its nourishment.*

It is questioned by medical jurists whether this decision is correct, and there are certainly many reasons to be assigned why the presumption should be against the child. Its life may be early endangered by a difficult or slow delivery. There may be a pressure on the umbilical cord, or the placenta may be partially detached, and its death ensue during the consequent hæmorrhage.

If the parturition be complicated with convulsions, the probability certainly is that the infant will first die. So also if it be very large, or if it be prematurely born. The only exceptions which have been suggested in favour of the survivorship of the child, are the following—when the mother is delivered of twins, she may bring forth the first, and die before the second is born: and again, when she is labouring under an acute disease. We know that the offspring is sometimes healthy, although the mother sinks during the delivery.†

A due comparison of these arguments, I imagine, will lead to the opinion that the presumption of survivorship is with the mother; for I will again mention, that in these cases, no person is supposed to have been present to witness the death of the parties, and such a length of time has also elapsed, that all examination, as well as inquiry into facts, are precluded.

A case that occurred to Pelletan may be mentioned in this place, although the consideration of it partly belongs to a previous chapter, (*on the viability of the infant*.)

A female at the eighth month of pregnancy died of a disease, which the physicians styled anasarca complicated with scurvy, (*anasarque compliquée de scorbut*.) A surgeon immediately performed the cæsarean operation, and extracted the child. In his *proces verbal*, he states, that after tying the umbilical cord, and removing the mucus from its mouth, he observed pulsations at the region of the heart, and also found that it preserved a sufficient

* Valentini's Pandects, vol. 1, p. 3 and 11. The statement given of this case by Fodéré, and after him by Capuron, is not correct. The chamber assign no reasons except "*causis physicis*," and it is the editor who explains them. There is evidently a mistake in the references to Valentini by Fodéré, (vol. 2, p. 96;) and it is of such a nature that one might be led to suspect that he had not minutely examined the Pandects.

† Fodéré, vol. 2, p. 94. Capuron, p. 135 to 148.

degree of warmth. It expired, however, (he adds,) three quarters of an hour after the decease of its mother. Six witnesses were also present at the operation, four of whom stated that they applied their hands to the breast and felt the pulsation. The other two had not observed it.

Pelletan was desired to examine this testimony and to give an opinion whether the child had actually survived its mother. He remarks that there are certain causes of death which may destroy the mother while the life of the infant may be preserved; of this nature, are sudden accidents, as drowning, a blow on the head, or violent hæmorrhage. Fœtal life is even compatible, with some inflammatory complaints, but the probability is certainly against the surviving of the child, when the mother dies from a lingering and wasting disease. For this reason, and also because it does not appear to have arrived at the full time, he was of opinion that the child had died in the womb. As to the signs of life, even if they were fully substantiated to have been present, he conceives them equivocal—the pulsation and heat were probably the remains of fœtal existence. And if the surgeon was correct in believing that the heart beat for three quarters of an hour, he was certainly blamable in not using means to promote respiration. But the probability is, that he was deceived.

For these reasons, Pelletan gave it as his opinion that the mother survived the child.*

I have been favoured with a communication on this subject by the Hon. DE WITT CLINTON. Some years since, he informs me, a case embracing the succession to a large landed estate, was tried in one of our courts under the following circumstances. The mother and child both died during delivery. If the latter was found to have survived, the father, by our law, was the heir; if the former, her relatives became entitled to the property. On the trial, it was proved that the child was born alive; and the question of the priority of death was then decided against the parties claiming as heirs of the mother.

II. *Of the presumption of survivorship of persons of different ages destroyed by a common accident.*

It will readily be observed, that if a father and son, or a husband and wife, perish in one common accident without witnesses.

* Pelletan, vol. 1, p. 322 to 341.

disputes may arise concerning the disposition of their property. Provision has accordingly been made in several codes for the avoidance of such difficulties. I shall give a concise sketch of these, interspersed with cases, to show the course of legal decisions on this curious subject.

The earliest ROMAN LAW on this point, directs the order of succession when persons of different ages die in battle. If two individuals of this description fell at the same time, he who had not arrived at the age of puberty, was to be deemed to have died first, but if a father and a son arrived at his majority, lost their lives together, the son was considered to have survived the father. In process of time, this provision was extended to all cases, where the precise period of death was unknown, and it was decreed, that in the case of a husband and wife, the former should be adjudged the survivor.*

The spirit of these laws guided the decisions of the continental tribunals for many ages, and Zacchias, in his elaborate discussion on this question, cites cases from several juriconsults, which were settled according to the dicta of the civil code. The mother, in one instance, was shipwrecked with her young infant, and in another, she, with her two children also young, was, killed by lightning. In both these, the parent was deemed the survivor.†

Our author also, in his *Consilia*, relates two cases, which deserve mention in this place.

A number of individuals perished by the fall of a building; and among these, a father aged sixty, and his son aged thirty. The bodies were found ten hours after the accident. That of the father was uninjured; but on the head of the son, there was a severe wound. The heirs of each put forth their claims, and Zacchias was consulted by the judges on the case. After a long comparison between the strength and state of health of the parties, he comes to the conclusion that the son survived the father. Being aware, however, that the wound in question was supposed to have accelerated the death of the former, he endeavours to avoid this difficulty, by suggesting that it was not necessarily

* Digest, lib. 34, tit. 5, *de rebus dubiis*. "Cum pubere filio mater naufragii periit cum explorari non posset, uter prior extinctus sit, humanus est credere, filium diutius vixisse. Si mulier cum filio impubere naufragio periit, priorem filium necatum esse intelligitur," &c.

† Zacchias, vol. 1, p. 440, 441.

mortal, nor of a nature to destroy his strength immediately; while the suffocation was a so much more urgent cause of death, that the father, from his valetudinarian state, and his advanced age, would first be destroyed by it.*

The propriety of this opinion is controverted by Foderé, and with considerable show of justice; for certainly a wound of the head, and of so severe a nature, may safely be considered the most sudden destroyer of life under the above circumstances.†

In another instance, a man and his family had eaten very copiously of poisonous mushrooms. They were all taken ill, and the domestics were sent to obtain assistance. Before they could return, the husband and wife had both expired. This couple, two years previous, had made an agreement, that whoever survived should possess the sum of two thousand crowns, and on the disposition of this, a dispute necessarily arose. Zacchias, when consulted, gave his opinion, that the husband had survived the wife. His reasons were the following. The husband, though sixty years of age, was robust and healthy; and, from the deposition of the servants, appears to have eaten but few of the mushrooms. The wife, on the contrary, although only forty, was asthmatic, and subject to affections of the stomach. She had eaten largely of the mushrooms, and added to these, other indigestible food. A poison, therefore, which acts violently on the organs of respiration, would soonest destroy one already diseased in those parts.‡

Foderé objects to this decision, that the opinion of the poison acting on the organs of respiration, is altogether hypothetical, and it probably is so, but certainly the general course of reasoning appears correct.

THE ANCIENT FRENCH LAW, in its adjudications, generally followed the Roman. In 1629, a mother, with her daughter aged four years, was drowned in the Loire. The parliament of Paris, on appeal, decided that the youngest had died first. Some years after, however, an opposite decision was pronounced by the same body. The mother, (*Bobie*,) and her two children, one aged twenty-two months, and the other eight years, were murdered secretly in the night. The husband claimed the property of his wife, on the ground that the children had survived, and the par-

* Consilium, No. 51.

† Foderé, vol. 2, p. 320, 321.

‡ Consilium. No. 85.

liament adjudged it to him.* The discrepancy in this case is very naturally explained by Foderé. Murderers would first destroy those whom they most dreaded, and afterwards proceed to the completion of their intended enormities.

Ricard, a celebrated advocate of the seventeenth century, has preserved a very curious case on this subject.

In 1658, a father and son perished in the famous battle of Dunes; and at noon the same day, the daughter and sister became a nun, whereby she was dead in law. The battle commenced at that very hour. It was inquired which of these three survived, and it was decided that the nun died first. Her vows being voluntary, were consummated in a moment; whereas the death of the father and brother being violent, there was a possibility of their living after receiving their wounds. It was then necessary to decide between them, and after some disputation, it was agreed to follow the Roman law, and to declare, that the son being arrived at the age of puberty, survived the father.†

In 1751, a merchant, aged fifty-eight, with his wife aged fifty, and his daughter of twenty-seven years, was drowned, with many others, in endeavouring to cross the Seine in a small vessel. The question of survivorship was raised by the relatives, and an opinion was given on the case by the celebrated Lorry.‡ He observes, that three causes probably conspired to accelerate the death of these individuals—fright—excessive coldness of the water, and any disease that might be present. Throughout the whole of his argument, he appears to proceed on the supposition, that the younger female was menstruating, and hence that the cold water, by checking it, would hasten her death. But this is not stated in any part of the case, and it certainly is very questionable whether, as he would seem to insinuate, that state of fulness of the system which menstruating females have, would accelerate the suffocation produced by drowning. If his argument means any thing, it is certainly directed to this point; and we have then to compare the probable state of a female of fifty who is beyond the menstruating period, and another labouring under that function. Certainly it will not counterbalance the

* *Causes Célèbres*, quoted by Foderé, vol. 2, p. 218.

† Foderé, vol. 2, p. 220. Smith, p. 382.

‡ This opinion, or "*Consultation de Médecine*," is published at full length in Mahon, vol. 3, p. 152. It is signed by Doctors Payen and Lorry, but was written by the latter.

difference in age and strength. He, however, gave it as his opinion that the daughter died first. But the parliament of Paris, by a decree of the 7th of September, 1752, admitted the presumption of survivorship to her, and ordered a disposition of the property accordingly.*

It thus appears, that for a length of time, the provisions of the Roman law were followed in France. But a curious distinction was made. The legal tribunals regulated the descent of property by them, but would not apply them to cases where legacies were bequeathed, and for this reason. It is necessary (say they) that a man should have heirs, but it is not necessary that he should have legatees; and accordingly, when testator and legatee died at the same time, the property passed to the heirs. The lieutenant of a vessel bequeathed the sum of two thousand francs to his captain, by a will which he made before going to sea. Both captain and lieutenant were lost in the same vessel, and when a law case was raised as to the legacy, the property was adjudicated in the manner above stated.†

The PRESENT FRENCH LAW on this subject, is contained in the following sections of the civil or Napoleon code.

“If several persons, naturally heirs of each other, perish by the same event, without the possibility of knowing which died first, the presumption as to survivorship shall be determined by the circumstances of the case, and in default thereof, by strength of age and sex.

“If those who perished together, were under fifteen years, the oldest shall be presumed the survivor.

“If they were all above sixty years, the youngest shall be presumed the survivor.

“If some were under fifteen, and others above sixty, the former shall be presumed the survivors.

“If those who have perished together, had completed the age of fifteen, and were under sixty, the male shall be presumed the survivor, where ages are equal, or the difference does not exceed one year.

“If they were of the same sex, that presumption shall be admitted which opens the succession in the order of nature—of

* Foderé, vol. 2, p. 220, 316.

† Foderé, vol. 2, p. 221.

course the younger shall be considered to have survived the elder.”*

Although these provisions are in the main founded on correct physiological principles, yet there are some objections of weight pointed out by Foderé. The clause that adjudges the survivorship to those under fifteen, when they and persons above sixty perish together, is certainly imperfect, since it may include infants of one, two or three years. These certainly would expire the soonest. And again, no provision is made for the case when persons under fifteen and under sixty perish together, although this may possibly be met by the last section.

The ENGLISH LAW appears to have no provisions on the subject except so far as the civil law is incorporated with it. There are, however, some cases which deserve mention.†

In 1766, General Stanwix and his daughter set sail in the same vessel from Ireland for England. They were shipwrecked, and not a single person on board was saved. The representative of the father to his personal estate, was his nephew, and the representative of the daughter, was her maternal uncle. These parties brought the case into chancery. On behalf of him whom the General's survivorship would have benefited, it was argued, that the ship being lost in tempestuous weather, it was more than probable that the General was upon deck, and that the daughter was down in the cabin, (as is almost ever the case with ladies in these situations,) and of course subject to more early loss of life than her father, who, as a man of arms and courage was, it was asserted, more able and more likely to struggle with death than a woman, and in which he might probably have been assisted by the broken masts and other parts of the rigging.

On the other side it was contended, that the General was old, and consequently feeble, and by no means strong enough to resist the shocks of such a terrible attack; that the daughter was of a hale constitution, and though of the weaker sex, yet being

* Civil Code, sections 720, 721, 722—quoted by Foderé, v. 2, p. 222, and Smith, p. 379.

† The most ancient case, I presume, in English jurisprudence, is that of *Broughton v. Randall*. According to Croke, (Elizabeth, 502,) the father and son were joint tenants; they were both hanged in one cart, but the son was supposed to have survived the father, since, as was deposed by witnesses, he appeared to struggle longest. The Jury (in Wales) gave a verdict of favour of dower to the son's wife. There is a shade of doubt, or at least a discrepancy in this case, as according to Noy, the father moved his feet after the death of his son. (Paris's Medical Jurisprudence, vol 1, p. 390.)

younger than her father, was proportionably stronger, and from the circumstance of youth, more unwilling to part with life, and that the probability of survivorship was therefore infinitely in favour of the daughter.

A second wife of General Stanwix also perished with him, and her representative brought forward a separate claim to the disputed property.

The court, however, finding the arguments on all sides equally solid and ingenious, waived giving any decision, and advised a compromise, to which the several claimants agreed.*

The following case was tried at the Prerogative Court, Doctors' Commons, in 1815.

Job Taylor, quarter-master sergeant in the royal artillery, had made a will, in which he appointed his wife, Lucy Taylor, sole executrix and sole residuary legatee. Having been for some time in Portugal on foreign service, he was returning home with her on board the *Queen Transport*, when the vessel in Falmouth harbour, struck upon a rock, in consequence of the violence of the weather, and sunk almost immediately afterwards. Nearly three hundred persons on board perished, and among them, Taylor and his wife. Taylor died possessed of property to the amount of £4000, and a bill in chancery was filed by the next of kin of the wife against those of the husband, to ascertain who was entitled to this property, but the proceedings were at a stand for the want of a personal representative of the husband. Both parties, therefore, applied to the court for letters of administration generally, or that the court would suspend granting any to either party during the dependence of the chancery suit, and in the mean time grant a limited administration. This latter prayer was, however, abandoned, on understanding that the court could not grant a limited administration, where a general one might

* Fearn's posthumous works, pages 38 and 39. This case appears to have attracted the attention of Mr. Fearn, and he accordingly prepared arguments for the purpose of seeing what could be advanced on both sides, with some appearance of reason; and after his death, they were published in the above collection. The scope of the argument in favour of the representative of the daughter is, first, to overthrow the probability that they both died at the same instant, and next, to strengthen the rule of the civil law, that the child shall be presumed to have survived the parent. The argument in favour of the representative of the father, is aimed against the propriety of allowing any weight to presumption, and it urges the known fact, that the father died possessed. This, it is conceived, should destroy a claim founded on the uncertain, unknown possession of a niece. (See page 35 to 72.) Both these arguments deserve an attentive perusal.

See, also, vol. 1, Blackstone's Reports, p. 640, *Rex v. Dr. Hay*.

be granted and was applied for ; and the present question therefore was, to whom the general administration should be granted—whether the next of kin to the husband as dying intestate, his wife not having survived so as to become entitled under his will, or the representatives of his wife, as his residuary legatee, she having survived so as to become entitled under that character.

It appeared from the affidavits exhibited on both sides, that at the time the accident happened, Lucy Taylor was below in the cabin, and her husband on deck. The water was rushing in fast, and he offered large sums to any one who would go below and save her, but finding none would venture, he descended himself, and the vessel immediately afterwards went to pieces. The bodies of Taylor and his wife were found close together, and it further appeared that she was a woman of a very robust constitution, and in the habit of enduring great fatigue by the management of the officers' mess, as well as that of a great many of the soldiers ; whilst he was rather sickly, and had been latterly much afflicted with an asthma.

It was contended on the part of the husband's next of kin, that by the principles of the Roman civil law, which had been adopted into the law of the country, and were in fact the only principles governing a case of this kind, it was laid down, that where two persons perished together in a common calamity, and it became a question which of the two was the survivor, the presumption of law should always be in favour of the person possessing the more robust constitution and greater strength, as being thereby the better fitted to struggle with the difficulties of his situation, and resist for a longer time the operation of death. Thus, when the father and the son shall perish together, the presumption of the survivorship is in the favour of the son if above the age of puberty, but of the father, if under : the same as to a mother and daughter ; and as to husband and wife, the presumption is in favour of the husband. This, however, like all other legal presumptions, was liable to be repelled by evidence to the contrary, but in this case it was contended, from the situation of the wife at the time the accident happened, that it was most probable she had perished before her husband descended to her rescue. Upon both grounds, therefore, both of principle and of fact, the court must conclude that the husband was the survivor, and accordingly grant the administration to his next of kin.

On the part of the wife's next of kin, it was contended, that the presumption of the law alluded to, was only applicable to cases where parties perish together in such a manner as to preclude the possibility of obtaining any evidence as to which of them was the survivor. Where, however, evidence as to that fact was produced, as in the present case, the case must be decided upon that evidence only. Here it appeared the parties had perished by the same accident, and their bodies were afterwards found together; and that the common course of nature had in this instance been inverted, by the wife being the most strong and robust of the two. The court must, therefore, necessarily conclude that she was the survivor, and accordingly grant the administration of her husband's effects to her representatives.

Sir John Nicoll observed, that this case presented itself for decision under very singular circumstances. He recapitulated them, and observed, that the question as to the limited administration had not been gone into; but that with respect to general administration, the counsel had argued upon the legal presumption of survivorship, and whether or not that presumption was sufficiently repelled by the facts in evidence. He agreed to the doctrine that had been laid down, of the presumption being in favour of the husband; but it was a necessary preliminary question, upon whom the burden of proof rested. The administration to the husband being the point in issue, his next of kin had *prima facie* the first right to it; but there being a residuary legatee, this right became superseded. The parties claiming under this latter character were not residuary legatees themselves specifically, but merely derivatively from one who was. They were, therefore, one step further removed from the property. The presumption of law was certainly always in favour of the heir at law with regard to freehold, and equally so of the next of kin with regard to personal property; the statute of distribution disposing of an intestate's property among his next relatives, solely upon the presumption that such was his intention, unless the contrary should be expressed. It was, therefore, incumbent upon the representatives of the wife, in this case, to prove her survivorship, as the party in whom the property vested, and from whom in consequence they derived their claim to it. He then entered into an explanation of the facts in evidence, and was of opinion that they were insufficient to repel the presumption of the husband's

having survived the wife, which the court was bound to assume, from the circumstance of their having been overwhelmed by one common calamity, and having perished together; observing, in particular, that though the wife might be very active and laborious in her domestic duties, yet the natural timidity of her sex might prevent exertion in the moment of danger; whilst the husband, on the other hand, though labouring under the bodily affliction of an asthma, might still retain his manly firmness in resisting impending destruction, particularly as, from his situation in life, he must have often faced death in various shapes. He was, therefore, in no degree satisfied by the proofs in the cause, that the wife survived the husband, and should therefore decree the administration to his next of kin. In thus deciding the law, however, he did not mean to affirm positively which of the two was the survivor, but merely that there was not sufficient proof that it was the wife, to repel the presumption of law that it was the husband. The administration was accordingly granted to the husband's next of kin.*

A later case is on record, viz. that of *Mason v. Mason*, which came before Sir William Grant, the Master of the Rolls, in March, 1816. The father, a middle-aged man, embarked with his son on board a vessel in India, on a voyage to England. The ship was lost, and all on board perished. In favour of the son, the civil law and the Napoleon code were cited; but it was replied, that as the father's will bequeathed certain property to each of his children, "who should be living at the time of his death," it required positive proof, and not presumption. The opposite party cannot prove that the son survived. The Master of the Rolls appears to have been of opinion against the son, but he finally sent to a jury, to try whether Francis Mason was living at the death of the testator.† The result of this I have not been able to find.

To these I will only add the following. Mr. Selwyn of the

* *Taylor and others v. Diplock*, (2 Phillimore's Reports, 261.) In a note to this case, that of *Wright v. Sarinuda*, or *Wright v. Netherwood*, (1793,) is also given from MS. notes. The question of survivorship, however, is not so much brought in, (the husband, the second wife, and the children by both wives, all were lost at sea,) as that of the revocation of the will. The following remark of the Judge (Sir William Wynne) may, however, be quoted: "I desired the priority of the death of the parties to be considered. I always thought it the most rational presumption that all died together, and that none could transmit rights to another."

† *Merivale's Chancery Reports*, vol. 1, p. 308.

war-office, with his lady, perished in the disastrous accident to the Rothsay Castle steam-boat, (1831.) By his will, he appointed Mrs. Selwyn his executrix; and in case she should die in his life time, other executors were appointed. The circumstances of their death raised the question, whether the contingency provided for in the will had occurred, and whether the wife's representatives, or the executors named in the event of her prior death, were to take administration.

The case came before the English Prerogative Court, November 7, 1831. The court said, that in other similar cases, it had been held, as both parties might be supposed to have perished together, that the wife could not have survived the husband; but in this case, the words were "in case she should die in my lifetime." The presumption was, that the husband, as the strongest of the two, survived the longest: and as it was the clear intention of the testator, that the representatives of the wife should not take the administration, and as there was no attempt on the part of those representatives to establish an intestacy, the court decreed probate to the executors.*

In reviewing these cases, it may probably appear to some that physical principles will never be sufficient to decide them with any degree of probability. This indeed is the opinion of some medical jurists, as Belloc, Orfila, and Duncan.† Others again, and in particular Zacchias, have laid down rules for judging in all the various kinds of accidents that may occur. Thus in those dead from hunger, the young should be supposed to have first perished, then infants, and lastly old men; and as to sex, women probably survive. In cases of drowning, a dissection and examination of the organs immediately acted upon, may lead to correct opinions; while in those found dead from noxious exhalations, we should examine the relative situation of the bodies to the noxious air, and the state of thoracic capacity. In all cases, the state of health should, if possible, be ascertained; and apoplectic habits should always be deemed to have been the earliest sufferers.‡

* London Atlas newspaper. This case (*in re Selwyn*) is reported in 3 Haggard's Ecclesiastical Reports, p. 748. See, also, *Colvin v. King's Proctor*, 1 Haggard, p. 92. † Belloc, p. 161. Edinburgh Medical and Surgical Journal, vol. 1, p. 334. Orfila's Leçons, vol. 1, p. 535.

‡ Zacchias, lib. 5, tit. 2, quest. 12. He also adds, that when persons are destroyed in a fire, those who are suffocated expire before those who are burnt to death. See Foderé, vol. 2, p. 228 to 232. Smith, p. 380.

Dr. Beatty has lately considered these *probabilities* more in detail, in a valuable Essay in the Cyclopaedia of Practical Medicine.* As to *age*, he concedes, that in general, very young persons, and those far advanced in age, sink more readily than adults and those in the middle stage of life. I have been, however, struck with the difficulty of forming positive opinions even on this, from an incident related by Burekhardt. In giving an account of a caravan coming in want of water in the Nubian desert, he says, that "the youngest slaves bore the thirst better than the rest; and that while the grown up boys all died, the children reached Egypt in safety.† Dr. Beatty agrees, that under similar circumstances, the *male* will survive longer than the *female*; but suggests several qualifying circumstances, which should enter into the estimate. The greater liability of the weaker sex to fainting—and their ability to preserve life longer, without marked arterial circulation, may, in many cases, tend to their preservation. As to *habit* and variety of constitution, all such that have a tendency to affections of the head and lungs, should be deemed the first victims, in case the causes of death are of a description to affect these. And the *moral condition* must not be overlooked. The brave survive the fearful and the nervous.

If we turn to the causes by means of which a number of persons may have been simultaneously destroyed, we shall find our data far from being numerous or settled. Dr. Beatty observes, that if a positively deleterious gas, such as sulphuretted hydrogen, or carbonic acid gas, has been the agent of suffocation, it may be presumed that death was rapid in all, and occurred at nearly the same time. A late writer, however, affirms, that from numerous observations, made for a long period, on persons dead from asphyxia, (and the context shows that he principally means carbonic acid gas,) the *female adult* survives longer than the *male adult*. The strongest individuals die first.‡

* Vol. 4, p. 97, art. Survivorship.

† Library of Entertaining Knowledge. The Menageries, vol. 1, p. 296.

‡ Sardaillon in *Annales D'Hygiène*, vol. 10, p. 173. In further confirmation of this, Devergie makes the following statement. According to official reports, 360 cases of asphyxia from carbonic acid have occurred in Paris between 1824 and 1835. Of these, 19 were double cases, (male and female affected at the same time,) and three only recovered. These three were females. Out of 73 females, 18 were saved, while out of 83 males, only 19 recovered, a proportion in favour of females of 4 to 5. Devergie, vol. 2, p. 923. In conformity to this, is a case in the *Transylvania Journal*, vol. 10, p. 697, on the authority of Prof. Dudley. It is that of a man and his wife suffocated in a close and small room by the gas from live coals. At 6 A. M., the man was found dead, *rigid and contracted*, the woman breathed and was recovered.

From the experiments of Dr. Edwards, it would seem that if death be caused merely by atmospheric air becoming deficient in oxygen, the adult will perish sooner than infants or very young persons. The dreadful mortality in the Black-Hole at Calcutta, shows how rapidly this cause acts on the male in the vigour of life.

Heat and *cold* operate differently on the same description of persons. The male and the adult have repeatedly sunk under their sufferings, in traversing the deserts of Egypt and Syria, while the young have escaped. Cold, on the contrary, will earliest destroy the infant and the young.

In cases of two or more persons drowned at the same time, Devergie remarks that those who bear the marks of apoplexy should be considered as having died the earliest; and again, those that die from syncope survive longer than when asphyxia is the cause. All wounds and injuries are to be supposed to have accelerated the fatal termination.

Such are some of the inferences drawn from positive facts, and from physiological researches. If they are deemed too few, or too contradictory, it still remains to determine, whether we should not have some positive rules to guide us. I cannot doubt the propriety and necessity of this.* And in adopting any as law, such as approach the nearest to natural justice, will be the best. The provisions of the French code, with some modifications, appear to be best adapted for administering equitably in the majority of cases that may occur.†

* I cannot, however, agree with a writer in Brande's Journal, vol. 3, p. 41, who proposes that in *all cases*, the order of nature should be presumed to have taken place, and that the child, whatever be its physical powers or age, should be deemed to have survived the parent. Certainly this is not warranted by observation or deduction.

† The following remark will show, that the necessity of enactments is elsewhere acknowledged. "With regard to cases of comparative unfrequency, indeed our law is culpably careless. We have shown ourselves no friends to codifying; but we contend that every ascertained doubt should be disposed of, without delay." (London Law Magazine, vol. 2, p. 549.)

CHAPTER XI.

AGE AND IDENTITY.

1. Notice of some questions in which the testimony of medical men may be required as to the age of an individual—the age at which he is considered capable of committing certain crimes. The period of absence that is considered as presumptive proof of a man's death. Decisions on this subject in England—Scotland—States of New-York and South-Carolina. Age beyond which pregnancy is deemed impossible. The Douglas cause. Laws on this point—cases. 2. Identity. Cases where physicians may be required to identify individuals by physical marks. Remarkable instances in France—Martin Guerre—Francis Noisau—Sieur De Caille—Baronet—Sieur Labbe. English cases. Effects of age in altering the personal appearance. Case of Casali. Remarkable case of disputed identity in New-York.

AGE is a subject of copious discussion with many of the older writers on medical jurisprudence, and even Foderé has enlarged on it in an extended manner. I can, however, conceive but very few cases in which a physician can be called on to give an opinion concerning it. There are laws in all civilized countries, defining the various periods, such as minority, majority, &c.; and if the registers or testimonials to prove these are wanting, it is difficult to suggest any physical proofs on which a medical man, more than any other individual, can venture to pronounce decisively.*

There are, however, exceptions to these remarks, as the readers of these pages must have noticed. It is often of the highest importance to ascertain the age of a foetus, or a new-born child; but the proofs of these have been more properly, we conceive, investigated in another place. There are also some points in the age of individuals, which deserve consideration in a treatise on MEDICAL POLICE, such as the proper period for contracting

* It appears, however, that in certain cases where doubt exists as to the age of an individual, *he is to be brought into court, to be inspected by the judges*, whether he be of full age or not. If the court has, upon inspection, any doubt of the age of the party, it may proceed to take proofs of the fact. (Blackstone, vol. 3, p. 332.) See Poyntz's case in Croke's James, p. 230. Also *Sliver v. Shelbach*, (1 Dallas's Pennsylvania Reports, 166.)

marriage, and the division of life into the different terms of infancy, youth, manhood, and old age.

It is proper, notwithstanding, to make some suggestions relative to this subject.

1. In the English and in our own laws, certain periods of life are prescribed, before which, individuals shall not be deemed guilty of particular crimes. Thus a male infant under the age of fourteen, is considered incapable of committing a rape. But it deserves notice, that occasionally, though of course rarely, there are cases of *early puberty*, where the strength and ability are fully sufficient to complete this crime, under certain circumstances. Instances are related where the generative functions have appeared perfect at a very early age, and every mark of manhood has been present.* Whether in a case of this kind, the premature powers of the individual should not be considered, instead of his actual age, is a question for legislators. While the period is positively fixed by law, no question can be raised concerning it.†

* Instances of premature puberty are numerous both in the male and female. Of the former I may refer to those related by Drs. White and Breschet, and Mr. South in the *Medico-Chirurgical Transactions*, vol. 1, p. 276, vol. 11, p. 446, and vol. 12, p. 76. The subjects were each about three years of age. Ballard mentions a case that lately occurred in Paris, where a female attributed her pregnancy to a boy ten years old. Instances of infantile menstruation are related by Dr. Wall, *Medico-Chirurgical Transactions*, vol. 2, p. 116, and by Sir Astley Cooper, *do.* vol. 4, p. 204, also by Meckel, *Lancet*, N. S. vol. 3, p. 264. Dr. Davis in his *Obstetric Medicine*, pages 236, 728, has collected a number of cases, with references to many others. For other cases of precocity in either sex, see Stalpart, vol. 1, p. 336, *London Medical and Physical Journal*, vol. 27, p. 522, *Chapman's Journal*, vol. 2, p. 198. *Philosophical Transactions*, vol. 19, p. 80, vol. 42, p. 627, vol. 43, p. 249, *London Medical Repository*, vol. 17, 353.

A case by Dr. D'Autrepont of a female child in *Monthly Journal of Foreign Medicine*, vol. 1, p. 185, from a German Journal.

A case by Mr. Thomas Smith in Scotland, *Brewster's Edinburgh Journal of Science*, N. S. vol. 1, p. 26.

Menstruation at nineteen months, case by Dr. Diffenbach, (from Meckel,) *North American Archives*, vol. 1, p. 70.

A case near London, by Dr. Burne, *Midland Medical and Surgical Reporter*, vol. 1, p. 137.

A case in New Jersey (male) by Dr. Johns, *New York Medical and Physical Journal*, vol. 9, p. 237; and one at Quebec, in a female, by Dr. Tessier, vol. 9, p. 240.

A recent case by Dr. Le Beau of Louisiana, of infantile menstruation, *American Journal of Medical Sciences*, vol. 11, p. 42.

A remarkable case of menstruation at one year, and pregnancy at 9. On the 20th of April, 1834, this female aged 10 years and 13 days, was delivered of a female child weighing 7¾ pounds. This occurred in Hickman county, Kentucky, and is related by Dr. D. Rowlett of Waisborough in that state. *Transylvania Journal*, vol. 7, p. 447.

† By the civil law, minors under the age of ten and a half, were not punishable for any crime; from ten and a half to fourteen, if found to be *doli capaces*, they were, but with many mitigations, and not with the utmost rigour of the law. The

2. Metzger suggests another point, which may occasionally require the opinion of a physician, viz: *How long a period of absence shall be considered as presumptive proof of a man's death?**

There are some law cases which may be quoted in elucidation of this. In *Benson v. Oliver*, in the court of exchequer, 5 George II. 1732, before Chief Baron Reynolds. "Upon trial of an issue directed by the Court of Exchequer, the deposition of a witness examined in 1672, was offered to be read, without any evidence of his being dead, relying upon the presumption from length of time, which would entitle the reading of a deed at that date. The Chief Baron refused to let it be read, saying, a deed had some authenticity from the solemnity of hand and seal. He said, if proper researches or inquiry had been made, and no account could be given of him, he would have admitted it at such a distance of time."† Again, in *Dixon v. Dixon*, where a legatee had been abroad twenty-six years, and had not been heard of for twenty-five years, the Master of the Rolls said he would presume him to be dead.‡ Chancellor Kent in this state, has decided, that ignorance in a family of the existence of one of the children, who had gone abroad at the age of twenty-two, unmarried, and had not been heard of for upwards of forty years, is sufficient to warrant the court or jury, to presume the fact of his death without issue.§

In Scotland I find the following stated. "Eighteen years absence and being holden and reputed dead, was found a sufficient probation to take off the presumption of life.|| And in 1830, the Court of Session granted a sum of money to legatees which had been settled on them by a person who went to India in 1805 and who had not since been heard of. Bail was, however, required to repay in case of his return," &c.¶

exception *nisi malitia suppleat atatem* must be noticed in many criminal cases and is approved by our own and the English law. See *Edinburgh Encyclopedia, art. Crimes.*

* Metzger, p. 242.

† *Strange's Reports*, vol. 2, p. 920.

‡ *Brown's Chancery Cases*, vol. 3, p. 510. "Where no account can be given of a person, the presumption of the duration of life (in England) ceases at the expiration of seven years from the time he was last known to be living." *Phillips' Law of Evidence*, p. 152. See also *Doe v. Jesson*, 6th East's Reports, p. 80, and *Dean v. Davidson*, (3 Haggard's Ecclesiastical Reports, 554,) *Doe dem. Knight v. Nepean*, (2 Neville and Manning's Reports, 219.)

§ *McComb, executor of Ogilvie, v. Wright*, (*Johnson's Chancery Reports*, vol. 5, p. 263.)

|| *Decisions of the Court of Session*, vol. 3, p. 435.

¶ *Edinburgh Law Journal*, vol. 1, p. 101. "In Scotland so far as marriage is con-

In a case where a person went as a sailor to Tobago, and had not been heard of for twenty years, and his age, if alive, would have been about fifty, the Court of Session, in Scotland, allowed the interest of a bequest to the person next entitled, and would have given the principal, if security for its return, should it be required, had been offered.*

The French code is very cautious on this subject. It requires thirty-five years of absence, or one hundred years since the birth of the absent person, before the heirs can demand a division of his property, and be put in definitive possession of it.†

In the state of New York, the presumption of the duration of life is reduced to the period of five years, provided the party has not been heard of during that time, and marriages are allowed to be contracted after the period stated;‡ but the space of seven years is adopted in the act for the more effectual discovery of the death of persons, upon whose lives estates depend.§

South Carolina. "An absence from the state for seven years, without being heard of, raises the legal presumption of the death of the husband.||

Missouri. "Absence beyond the seas for seven years, without being heard from, raises the presumption of death."¶

3. A third subject discussed under this title has been, *the age at which pregnancy is possible, and beyond which it cannot occur*. The last was much canvassed in the famous Douglas cause, tried some years since in England. Its leading incidents, were as follows: Lady Jane Douglas was married August 10th, 1746, to Col. Stewart. She became pregnant, and this fact, was notorious in January, 1748, and on the 10th of July, 1748, being in her fiftieth year, she was delivered of twins at Paris. Of these,

cerned, at least a man is presumed to be dead who is not heard of for seven years, in which case, his wife may form a new union, by proclaiming and calling on her husband to appear at the cross of Edinburgh, and as he may be in a distant country or at sea, it is necessary to give him a fair opportunity of hearing the summons, the law wisely provides that he shall also be summoned at the shore and pier of Leith. I am not aware that the law applies in cases where property is concerned." DUNLOP.

* Campbell v. Lamont. Cases in the Court of Session, vol. 3, p. 98. For similar cases, see Fettes v. Gordon, Ibid. vol. 4, p. 150. Case of Mrs. Hyslop, Ibid. vol. 8 p. 919. In this last, the Lord President observed that he remembered the reappearance of a party, after being unheard of for a period of 33 years.

† Code civil, sect. 129. See the whole chapter.

‡ Revised Laws, vol. 1, p. 113, and Revised Statutes, vol. 2, 687.

§ Revised Laws, vol. 1, p. 103, and Revised Statutes, vol. 1, p. 749.

|| American Jurist, vol. 12, p. 152, quoted from 1 Hill's South Carolina Reports, 8, Boyce v. Owens.

¶ American Jurist 18, 476, quoted from 3 Missouri Reports, 529, Salle v. Primm.

one, named Sholto, did not survive to manhood—the other, Archibald, did. Lady Jane after their birth miscarried.

In process of time, the father and mother both died. Their positive declarations had convinced the Duke of Douglas, and he left his dukedom and other estates to his nephew, and their son, Archibald, who was the appellant in the cause. The Duke of Hamilton appears to have conducted the prosecution, and at all events, the claim was opposed on the ground that they were supposititious children. The cause came up for final adjudication in the House of Lords, in 1769, when Lord Chancellor Camden, and Lord Chief Justice Mansfield gave opinions in favour of the appellant. The following extracts from that of Lord Mansfield are interesting, both in reference to the point under consideration, and to one noticed in another part of this work, (*Resemblance of children to their parents.*)

“Lady Jane became pregnant in October, 1747, at the age of forty-nine years, a thing (says he) far from being uncommon, as is attested by physicians of the first rank, and confirmed by daily experience. It is further proved, that the elder child, the appellant, was the exact picture of his father, and the child Sholto as like Lady Jane as ever child was like a mother.”

“I have always considered likeness as an argument of a child’s being the son of a parent, and the rather, as the distinction between individuals in the human species is more discernible than in other animals; a man may survey ten thousand people, before he sees two faces perfectly alike, and in an army of an hundred thousand men, every one may be known from another. If there should be a likeness of features, there may be a discriminancy of voice, a difference in the gesture, the smile, and various other things: whereas a family likeness runs generally through all these, for in every thing there is a resemblance, as of features, size, attitude and action. And here it is a question, whether the appellant most resembled his father, Sir John, or the younger Sholto resembled his mother. Many witnesses have sworn to Mr. Douglas being of the same form and make of body as his father; he has been known to be the son of Colonel Stewart by persons who have never seen him before, and is so like his elder brother, the present Sir John Stewart, that except by their age, it would be hard to distinguish the one from the other.”

"If Sir John Stewart, the most artless of mankind, was actor in the *enlèvement* of Mignon and Sanry's children, he did in a few days what the acutest genius could not accomplish for years. He found two children, the one, the finished model of himself, and the other, the exact picture, in miniature, of Lady Jane. It seems nature had implanted in the children, what is not in the parents; for it appears in proof, that in size, complexion, stature, attitude, colour of the hair and eyes, nay, and in every other thing, Mignon and his wife and Sanry and his spouse, were *toto cælo* different from and unlike to Sir John Stewart and Lady Jane Douglas." The House of Lords decided in favour of the appellant, five peers only dissenting.*

I have incidentally noticed this subject in a former chapter, and mentioned some cases of births in females of an advanced age.† As to premature pregnancy in European countries, the most astonishing instance probably is given by Meyer, of a

* *Collectanea Juridica*, consisting of tracts relative to the law and constitution of England. (London, 1792, vol. 2, p. 386.) The appellant was afterwards created Lord Douglas, and died in his 80th year, Dec. 26, 1827. In a brief biography of him, it is stated that his mother's father was 51 years old and upwards when she was born, thus being born in 1646, and exhibiting an interval of 181 years between the birth of the grandfather and the death of the grandson. (*Annual Biography and Obituary* for 1829, vol. 13, p. 433.)

Frequent allusions to this cause will be met with in Boswell's *Life of Johnson*. Boswell was a great stickler for Lord Douglas. (See Croker's *Boswell*, American edition, vol. 1, p. 246, 312, 447, &c.) In the Scotch Court of Session, the judges were divided, eight for the duke of Hamilton and seven for Mr. Douglas, and on this the appeal was brought to the House of Lords. I am indebted to Mr. Rich, of London, for procuring for me, recently, "A summary of the Speeches, Arguments and Determination of the Right Hon. the Lords of Council and Session in Scotland, upon the important cause wherein the duke of Hamilton and others were plaintiffs, &c. By a Barrister at Law, 8vo. London, 1767."

† Vol. 1, p. 207. If such cases present themselves in legal investigations, the proofs in favour of maternity should be clear and decisive. Probably the most remarkable instance on record (*if true*) is that related by the Bishop of Sens, in the memoirs of the French Academy of Sciences for 1710, of a man in his diocese, at 94, and a woman at 83, having a child. (*Memoirs of Literature*, vol. 7, p. 78.)

Pliny says that Cornelia, of the family of Scipio, bore a child at 60. (*Paris's Medical Jurisprudence*, vol. 1, p. 173.) He mentions other cases. In Dodsley's *Annual Register* for 1775, is the following: "June 25, 1775. The wife of Mr. Ladenberg, wine merchant in Castle-street, Leicester Fields, in the 54th year of her age, was brought to bed of twins. Mrs. L. though married upwards of thirty years, never had a child before." Other cases are related in the *Cyclopedia of Practical Medicine*, vol. 3, p. 491. During the present year, (1833) a case has occurred in the English courts, in which the leading question appears to be, whether it is possible for a woman to have a fourth child thirty years after the birth of her first-born? or in other words, whether this could occur at the age of fifty-one? Dr. Epps mentioned the case at the Westminster Medical Society, and it was allowed that if she had continued to menstruate up to the required time, there was no physical reason why conception might not take place at any period during the interval. (*Lancet N. S.*, vol. 12, p. 45.) I presume this is the case of Andrews v. Lord Beauchamp, in the Vice-Chancellor's Court, lately mentioned in the newspapers.

Swiss girl becoming a mother at nine years of age.* Concerning this and similar cases, we can only say, that they are examples of precocity, resembling those which occasionally occur in the other sex.

“The English law admits of no presumption as to the time when a woman ceases to have children, though this enters into most other codes.”†

In Scotland, there appears to be a similar provision: “A daughter, suing for her provision, which was due to her, failing heirs male of the grantor’s marriage, was repelled, the father and mother being both alive—though the father had even been for a long time furious, and the mother past fifty.”‡

The subject of IDENTITY seems to have a connexion with the one we have noticed, and like it, may occasionally require the opinion of physicians.

Cases have not unfrequently arisen, both in civil and criminal courts, where the question at issue has been, *whether an individual be really the person whom he pretends or states himself to be*. The controversy in such instances must originate from the resemblance that exists between him and another person; and that this has often been most striking, we have not only the testimony of antiquity, but the experience of all who have had opportunities of extensive observation. The title of one of the chapters of Pliny’s Natural History, is *Cases of Resemblance*, and he enumerates several persons who could hardly be distinguished from each other—the great Pompey from the plebeian Vibius—the consuls Lentulus and Metellus—and the impostor Artemon, from Antiochus, King of Syria.

When cases, in which the identity of an individual is contested, come before a court, the difference of opinion that exists, will generally be of such a nature as to render the duty of the tribu-

* Brendel, p. 76. Metzger, p. 480.

† The law is thus laid down in *Reynolds v. Reynolds*—(Dickens’ Reports, vol. 1, p. 374)—on a motion to divide a legacy among all the children living at the decease of a father. The father was sixty-two, and the wife of the same age, and infirm, and therefore there was no probability of their having more children. Sir Thomas Clarke, Master of the Rolls, said, that though it might be improbable, yet it was not impossible, and would have denied the motion, but the father consenting, and the other children consenting, that their respective shares should stand as a security to answer what any after born child, should there be one, might be entitled to, the court granted the motion.

So also in *Leng v. Hodges*, decided in 1822. (Jacob’s Chancery Reports, p. 585) a fund was paid to persons entitled to it, subject to the contingency of a female, now of the age of sixty-nine, having children, on their recognizance to refund in case of that happening.

‡ Decisions Court of Session, vol. 1, p. 332.

nal trying and difficult. This subject is calculated to excite attention, to awaken discussion, and to cause great positiveness of opinion on one or the other side. Every feeling of the heart is enlisted, and the oaths of individuals must necessarily be of the most discordant and opposite nature. It may be stated generally, that in such instances, the advice of the physician may assist in leading to the detection of falsehood, and the establishment of truth. If there be any thing like positive data, which cannot deceive, he can aid in their developement: and they must be drawn from a source which naturally falls under his province.

The narrative of a few cases will prove the most instructive notice that I can give of this subject.

The most celebrated, probably, that has ever occurred, if not in Europe, at least in France, is that of Martin Guerre, brought before the parliament of Tholouse, in 1560. Its incidents are so extraordinary, that many have deemed it a fictitious narrative.

Martin Guerre had been absent from his home for the space of eight years. An adventurer named Arnald Dutille, who resembled him, formed the design of taking his place, and actually succeeded so far, as to be received by the wife of Martin as her husband, and to take possession of his property. Children were born to this union; and he lived three years in the family, with four sisters and two brothers-in-law of Martin, without their suspecting his identity. It became, however, a subject of dispute. Several hundred witnesses were examined, and of these, thirty or forty swore that he was the real *Martin Guerre*; nearly the same number, that he was *Arnald Dutille*; while others deposed, that the resemblance between the two men was so great, that they could not decide whether the prisoner was an impostor or not. The perplexity of the judges on this occasion was very great; but in spite of many things that weakened his cause, they were on the point of deciding in favour of Arnald, when the arrival of the true Martin developed the deceit. Even when confronted, the impudence and effrontery of Dutille was such as to lead many to doubt, until the brother and sisters of the absent person fully recognized him.

I am unable to say whether physical resemblances were much noticed in this case, as the above narrative is all the authentic information that I have been able to obtain concerning it. In the following instances, however, there appears to have been considerable discussion on these points.

A child, called *Francis Noiseu*, born at Paris on the 22d of December, 1762, was put to nurse in Normandy. When about sixteen months old, it was taken ill, and in consequence was bled in the right arm. It had also a cicatrix on the inner side of the left knee, from a gathering which had been cured by caustics.

On the 13th of August, 1766, this child, aged three years and eight months, was lost, and could not be found; but on the 16th of June, 1768, its godmother, seeing two boys pass, was struck with the voice of one of them. She called him to her, and became convinced that it was her godson. The knee and arm were examined, and the cicatrices found.

In the mean while, another person, the widow *Labrie*, claimed this as her son. It had marks of the smallpox on its body; and this was, on investigation, deemed a strong argument in her favour, since it was not pretended that Noiseu had laboured under this disease previous to his being lost. Many witnesses also attested to its being her child. After several examinations before various courts, it was decided that the boy was the son of the widow *Labrie*.

Foderé impugns this adjudication, and with great appearance of justice. He observes that there were evidently physical marks sufficient to guide to a proper decision, and that these were disregarded. The cicatrix at the knee, according to one party, was caused by an affection to which *caustics* had been applied; while, according to the other, it had originated from a slight tumour or *abrasion* during the period of nursing. Certainly, surgeons could decide from the appearance, which of these causes produced it. Again the boy had a cicatrix on the right arm. The widow *Labrie* said her child had never been bled, while it was stated that Noiseu's had. Three surgeons, on examining this cicatrix, declared that it was made with a sharp instrument; but others pronounced that it was the consequence of an abscess, and that no mark of venesection was present. Lastly, it was certainly no argument against the maternity of Noiseu, that the boy bore marks of smallpox. He was missing nearly two years, and might have suffered under it during his absence. It appears also that the subject of the dispute had some peculiarities in shape, which were not properly investigated.

The *Sieur De Caille*, being a protestant, fled to Savoy at the period of the revocation of the edict of Nantes. His son died before his eyes at Vevay. Some years after, an impostor pretended

that he was the son of this person, and claimed the succession to his property. He was imprisoned, and his cause remained before the parliament of Aix for seven years. Hundreds of witnesses (among which were the nurses and domestics of the family) swore that he was the son of De Caille; and the public sentiment was strongly in his favour, as he was a catholic. Testimonials, sent from Switzerland, that the real son was dead, were of no avail; and the parliament declared, in 1706, that he was what he claimed to be. The wife of this impostor shortly after discovered, that although she had been silent, yet his elevation would not profit her. She therefore began to mention who he actually was; and on appeal, the cause was transferred to the parliament of Paris. The evidence adduced, showed that the late son of De Caille had some distinguishing peculiarities in shape and make. He was of small height, and his knees approached each other very closely in walking. A long head, light chestnut hair, blue eyes, aquiline nose, fair complexion, and a high colour, were his other characteristics. The stature of the impostor (Pierre Megé, a soldier) was, on the contrary, five feet six inches; and his black hair, brown and thin complexion, flat nose and round head, sufficiently distinguished him from the former individual. Other physical conformations were observed which it is not necessary to mention, but which strengthened the testimony against Megé. The parliament accordingly decided that he was an impostor.

The last French case I shall mention, is that of *Baronet*. He was born in 1717, in the diocese of Rheims, and left his native place, at the age of twenty-five, in search of a livelihood. Having served as a domestic for a length of time, he returned, after an absence of twenty-two years, to claim the little property left him by his parents. His sister, however, had used it, and she prevailed on a neighbour, named Babillot, whose son had departed about the same time that Baronet went away, to claim her brother. Although the attempt failed, and the individual could not be prevailed on to continue in the opinion that Baronet was his son, yet the sister had sufficient influence to cause her brother to be condemned as an impostor, and to be sentenced to the galleys for life.

A few years produced a revolution in the minds of those who had witnessed this cause, and an appeal was made to the parliament of Paris. The celebrated surgeon, Louis, was consulted,

and his opinion inclined in favour of Baronet, who was discharged and put in possession of all his rights.

The physical facts in this case are so striking, that evidently prejudice, and indeed bribery, must have influenced the first decision. Baronet was sixty years old, Babilot was only forty-six. The father of Babilot swore that his son had a mark (a *navus maternus*,) on his thigh, but this could not be found on Baronet. Other peculiarities were also mentioned, which identified the individual.*

An examination of the cases just related, will lead to the conclusion, that considerable importance should be attached to physical signs. The recollection of individuals may be weakened, and even the physiognomy of the persons in question may be altered, while marks will remain which are not to be effaced. It is on such that reliance should principally be placed; although I am far from denying, that instances may occur where, even in these, a most striking conformity will be observed.

In England several cases of interest have occurred. Dr. Paris notices, amongst others, that of Frank Douglas, a well known man of fashion, who was committed for highway robbery on the positive oath of one of the parties plundered, and very narrowly escaped conviction. On the apprehension of the notorious highwayman, Page, the mystery was explained; the personal resemblance being so great, as to deceive all ordinary observation.†

* The above cases are all taken from Foderé, vol. 1, chap. 2, who quotes the *Causes Célèbres*. The following is interesting from its connexion with physical facts. It is extracted from the *Causes Célèbres par Mejan*, vol. 4, p. 329.

On the 14th of May, 1808, at 10 P. M. the Sieur Labbe, Mayor of the Commune of Foulanges, in the Department of the Calvados, in passing on horseback along the highway with the widow Beaujeau, his servant on foot, was fired at with a gun from behind a ditch and through a hedge. He was wounded in the hand. It was an hour and forty-three minutes before the rising of the moon and the night was dark, yet both Labbe and his servant swore, that they recognised the assassins by the light of the discharge. One of the persons accused was arrested, tried, and condemned to death, but an appeal was taken to the court of Cassation. The advocate consulted M. Lefevre Gineau, member of the Institute and Professor of Experimental Physics in the Imperial College of France, *whether it was possible that the priming (amorce) on being inflamed could produce light sufficient to discover the face of the person firing?* Gineau with his son and Dupuis and Caussin, also Professors, with several others, retired on the 8th of December at 8 P. M. into a dark room and there Prof. Gineau fired several primings, the spectators being stationed at different distances in order to witness the effect. The light produced was strong, but fuliginous, and so rapidly extinguished, that it was impossible to distinguish the individual firing. "A peine etait il possible d'entrevoir la forme distincte d'une tete. On ne reconnaitait pas celle du visage." They then descended into the court-yard of the College, loaded the gun with powder, but the results on discharging were the same. The condemned was acquitted.

Dr. Montgomery in the art. *Identity*, Cyclopedia of Practical Medicine, mentions several analogous cases.

† Medical Jurisprudence, vol. 1, p. 222, and vol. 3, p. 143.

"In cases (says Blackstone) where the prisoner after conviction escapes and is retaken, the jury shall be impannelled to try the collateral issue, viz. the identity of his person, and not whether he is guilty or innocent, for that has been tried before. And in these collateral instances, the trial shall be instanter, and no time allowed the prisoner to make his defence or produce his witnesses, unless he will make oath that he is not the person attainted."*

But there is another subject of consideration suggested by the present inquiry, which we must not omit; and that is, the change which a number of years produces, as also the hazard that this alteration may be productive of injury to an individual, in causing doubts of his identity.

A noble Bolognese, named Casali, left his country at an early age and engaged in military pursuits. He was supposed to have lost his life in battle, but after an absence of thirty years, returned and claimed his property, which his heirs had already appropriated to themselves. Although there were some marks which appeared to identify him, yet the change in appearance was so great, that none who remembered the youth were willing to allow that this was the individual. He was arrested and imprisoned. The judges were in great doubt, and consulted Zacchias, whether the human countenance could be so changed as to render it impossible to recognize the person. This distinguished physician, in his consultation, assigns several causes which might produce such an alteration; as age, change of air, aliments, the manner of life, and the diseases to which we are liable. Casali had departed in the bloom of youth; he then entered on the hardships of a military life, and if the narrative of the individual in question is to be credited, he had languished for years in prison. All these causes, he conceived, might produce a great change in the countenance, and render it difficult to recognize him.

The judges, on receiving this opinion, examined into the physical marks, and as the heirs could not prove the death of Casali, his name and estate were decreed to him.†

* Commentaries, vol. 4, p. 396. In the *Attorney-General v. Fadden*, (Price's Exchequer Reports, vol. 1, p. 403,) the defendant represented that the person who had actually committed the offence, had assumed his name, and that the question would be one of mere identity. He therefore prayed to be brought into court by *habeas corpus*, (he was now in jail,) in order to be present at the trial. It was granted.

† Zacchias, *Consilium*, No. 61. It is to such cases, that the beautiful quotation from Marmion, by Dr. Paris, is applicable:

It is not, however, in foreign countries only that these difficult cases have happened. An individual was indicted and tried before Judge Livingston, at New York, in 1804, on a charge of bigamy, and the whole evidence turned on the question of his identity. He was called Thomas Hoag by the public prosecutor, but stated himself to be Joseph Parker. Several witnesses swore that they had known him under the name of Thomas Hoag, among whom was a female whom he had married, and afterwards deserted. It was stated that Hoag had a scar on his forehead, a small mark on his neck, and that his speech was quick and lisping. All these peculiarities were found on the prisoner. Two witnesses deposed that Hoag had a scar under his foot, occasioned by treading upon a drawing-knife, and that this scar was easy to be seen, and had been seen by them. On examining his feet in open court, *no scar was to be found on either of them*; and it was further proved, that at the period of his alleged courtship of the second wife in Westchester county, he was doing duty as a watchman in the city of New York. The jury acquitted him.*

In all disputed cases, says Foderé, we should particularly notice malconformations or congenital marks. These cannot be removed. All wounds also of the soft parts leave marks of their existence. Scrofulous ulcers have their cicatrices—smallpox and burns leave their marks. The marks of the executioner, he adds,

“Danger, long travel, want and wo,
Soon change the form that best we know;
For deadly fear can time outgo,
And blanch at once the hair:
Hard toil can roughen form and face,
And want can quench the eye's bright grace,
Nor does old age a wrinkle trace
More deeply than despair.

The following singular case is mentioned by Dr. A. T. Thomson: “I recollect a captain of an Indianman, who was a man of low stature when he left England, but had acquired upwards of an inch in height on his return—a circumstance which the surgeon ascribed to his having been salivated twice in the course of the voyage.” (London Medical and Surgical Journal, vol. 6, p. 519.) Such cases, in persons beyond the usual period of growth, must, however, be very rare.

* Hall's American Law Journal, vol. 1, p. 70. Dr. Smith also mentions a case that occurred in England in 1817, where, on an inquest, an old man declared a dead female to be his daughter. On investigation, however, the daughter was found alive and hearty, and was produced before the coroner. The resemblance here was very great between the living and the dead woman.

“When witnesses swear to the identity of a dead person, unless their *causa scientiæ* consist in scars, tattooing, or other indelible marks, their evidence should be taken with the greatest possible caution by the jury, for very soon after death such a total change of the features takes place, that it is impossible for the nearest relations to recognize them. This is finely illustrated in a case tried before the High-Court of Justiciary in Edinburgh, last winter, (I quote from memory, having no do-

cannot be effaced. By means of a plate of pewter, he saw the letters come out on the back, although the criminal, who had escaped from prison, had caused an eruption over its whole surface. The cold body made the other parts pale, while the fatal letter V appeared in full relief.

Devergie, however, observes that he has often had occasion to examine cicatrices of this kind, without being able to distinguish the letters—repeated friction with the palm of the hand being necessary to revive them. This was more particularly the case when the branding had been inflicted in youth. The best general direction then is to use friction. The mark of the cicatrix remains white, in spite of this stimulus.*

Finally, we should notice all peculiarities of physiognomy, and of professions and trades. These last, as is well known, develope some members more than others.†

In the chapter on PERSONS FOUND DEAD, the reader will find minute directions for identifying the age and sex.

cuments.) A resurrection-man was tried for raising the body of a young woman from the church-yard of Stirling—nine weeks after death, the body was discovered and identified by all the relations, not only by the features, but by a mark which they believed could not be mistaken, she being lame of the left leg, which was shorter than the right. There was a good deal of curious swearing as to the length of time after death, that the body could be recognized, but the jury were convinced that the *libel was proven*, and gave a verdict accordingly. Now I am certain that this was not the body of the woman who was taken from the church-yard of Stirling, but one that, at least six weeks after the time libelled, was buried in the church-yard of Falkirk, from which she was taken by this man, who also took the other, for which he was tried—she also was lame of the left leg; thus, though guilty of the offence laid to his charge, he was found guilty by a mistake of the *corpus delicti*.

“Considerable interest is at this moment excited in the public mind, by the case of a young gentleman of the name of Robinson, who was tried lately, (July, 1824,) for divers acts of theft. Many people swore positively to his identity, and the jury found him guilty of several of the acts charged. Yet, on a second trial, when he was sworn to as positively, most satisfactory alibis were proved. The case at present is involved in mystery, but it is generally believed that the king will pardon him, as the second trial has thrown doubt on the first.

“Since writing the above, the royal mercy has been extended to him.” DUNLOP.

* Devergie, vol. 2, p. 32, 929.

† Dictionnaire des Sciences Médicales, vol. 24, art. *Impressions*.

Orfila in a memoir on the inferences to be drawn from the colour of the hair, in cases of disputed identity, states, as the result of numerous experiments made by him, that the colour of black hair can be altered by various agents,—that light-coloured hair, with sundry exceptions, can be stained of a dark colour—but that red, or blond, or chestnut coloured hair, is changed with great difficulty, and indeed it can hardly be effected. In all instances of this description, he remarks, that the use of these agents may be detected on a close examination, since it is impossible to effect a total change. Some straggling hairs will peep out and testify to their original colour. (Annales D’Hygiène, vol. 13, p. 466.)

CHAPTER XII.

INSURANCE UPON LIVES.*

Definition of an insurance upon life—of an annuity. Objects of inquiry with insurers upon lives—exceptions made by them. What vitiates policies—fraud or falsehood as to the health of the insured—gout—dyspepsia, whether organic or functional—confinement—omission to mention the actual medical attendant—consumption—mental imbecility—disease of the kidneys—habits of intoxication—opium eating. French annuity case.

“AN *insurance upon life*, is a contract by which the underwriters, for a certain sum, proportioned to the age, health, profession, and other circumstances of that person whose life is the object of insurance, engage that the person shall not die within the time limited in the policy; or, if he do, that he will pay a sum of money to him in whose favour the policy is granted.”† The nature of the agreement is such, that in proportion to the probability of the prolongation of the life, will be the smallness of the premium. *Annuities* are regulated on the same principles, and the only difference is, that here the person deposits the required sum at once, and the company agree to pay a certain *annual* sum during his life.

It is the custom with insurance offices to refer the applicant to some professional man well acquainted with his constitution and habits; or who, in other words, has been his medical adviser; or persons are directly appointed as physician and surgeon to the respective offices, and charged with the duty of examination. In either or both cases, the result of their inquiries guides them in accepting or refusing an insurance. The leading objects of investigation, of course, are, whether he labours under any disease, and particularly one that tends to shorten life; whether his habits

* In the fifth volume of the New York Medical and Physical Journal, (1826,) will be found an essay on this subject, which forms the basis of the present chapter. Several years after its publication, I met with a work entitled “The Law of Fire and Life Insurance and Annuities, with Practical Observations, by Charles Ellis, Esquire, of Lincoln’s Inn, Barrister at Law.” It is reprinted in the Law Library, edited by Messrs. Sergeant and Lowber, (June, 1834.) Chapter 2d of Part 2d contains a notice of most of the English cases to which I have referred.

† Park on Insurance, vol. 2, p. 571, 6th edit. Paris and Fonblanque, v. 1, p. 381.

are temperate or not, and his employment unhealthy or dangerous.* The following list of questions will give an idea of the required minuteness:

"Before a common insurance company will undertake the risk of paying £100 on the death of an individual, they require the following to be answered by credible and intelligent witnesses: How long have you known Mr. A. B.? Has he had the gout? Has he had a spitting of blood, asthma, consumption, or other pulmonary complaint? Do you consider him as at all predisposed to any of these complaints? Has he been afflicted with fits, or mental derangement? Do you think his constitution perfectly good in the common acceptance of the term? Are his habits, in every respect, strictly regular and temperate? Is he at present in good health? Is there any thing in his form, habits of living, or business, which you are of opinion may shorten his life? What complaints are his family most subject to? Are you aware of any reason why an insurance might not with safety be effected on his life?"† Whether the party has had either the smallpox or cowpox?

"With respect to the risk which the underwriter is to run, this is usually inserted in the policy, and he undertakes to answer for all those accidents to which the life of man is exposed, unless the *cestuy qui vie* puts himself to death, or he die by the hands of justice." Hence, these are generally excepted in policies,‡ and

* Smith's Forensic Medicine, p. 517, 2d edition.

† Combe on the Constitution of Man, p. 164, 2d American edition. Mr. Lawrence, in his Lectures on Surgery, when speaking of the liability of an organ that has once been inflamed, again becoming so, observes, "Persons who conduct the business of life insurance, are well aware of this fact. When a person wishes to insure his life, the insurers inquire not only whether he is healthy at the time, but whether he at any previous time has had serious disease; and if they find that he has had such disease, though he is healthy at the time, they commonly refuse his insurance; they consider him to be an unsound man." (Lancet, N. S. vol. 5, p. 266.)

‡ In a case where the noted Fauntleroy effected an insurance on his life, it appeared that there was no exception, as to death by the hands of justice, in the policies of this company, (the Amicable.) It was urged, however, that the insured had perpetrated a crime which the laws of his country punish capitally, and that therefore his death was as much his own act as if he had committed suicide. But the court (Master of the Rolls) decided that "the obligation to pay did not determine, merely because the conduct of the party insured produced the event, even though such conduct was against the criminal law of the country. To avoid the obligation, the act must be done fraudulently, for the very purpose of producing the event." (Bolland v. Disney, 3 Russel's Chancery Reports, p. 351.) The House of Lords, however, on appeal, reversed this decision, on the ground that, as a condition in a policy saving the insurance in the event of the party effecting the insurance committing felony, would clearly be void, as affording encouragement to crime, and being contrary to public policy, so no effect could be given to a policy which in reality involved that condition. (2 Dow and Clarke's Parliamentary Reports, vol. 1, p. 1.)

in certain cases, also, the premium is special, and subject to particular arrangement, such as exposure to risk by long voyages, or by military service, and residence in unhealthy climates. I observe, also, that during the late prevalence of cholera in Great Britain, several, and probably all, of the offices, excluded death by that disease, (unless an increased rate of premium was paid,) during its continuance as an epidemic.

Policies on lives are vitiated by fraud or falsehood as to the health of the insured. This then is the point on which the physician's testimony may be, and indeed is, frequently required. I apprehend that the best and most practical elucidation that I can give of this subject, is to notice cases that have occurred, and I shall do this somewhat in chronological order.

The two following are mentioned by Mr. Park in his treatise on insurance. It will be noticed, however, that they occurred previous to the establishment of the preliminary inquiries already quoted. Indeed it is probable that the case of Sir Simeon Stuart led the offices to name, specifically, gout and other constitutional disorders.*

In an action on a policy made on the life of Sir James Ross for one year, from October, 1759, to October, 1760, *warranted in good health at the time of making the policy*; the fact was, Sir James had received a wound at the battle of La Feldt, in the year 1747, in his loins, which had occasioned a partial relaxation or palsy, so that he could not retain his urine or fæces, and which was not mentioned to the insurer. Sir James died of a malignant fever within the time of the insurance. All the physicians and surgeons, who were examined for the plaintiff, swore, that the wound had no sort of connexion with the fever; and that the want of retention was not a disorder which shortened life, but he might, notwithstanding that, have lived to the common age of man; and the surgeons who opened him said, that his intestines were all sound. There was one physician examined for the defendant, who said the want of retention was paralytic; but being asked to explain, he said it was only a local palsy, arising from the wound, but did not affect life; but on the whole, he did not look upon him as a good life.

Lord Mansfield, before whom the case was tried, observed—

* Paris and Fonblanque, vol. 1, p. 384.

"The question of fraud cannot exist in this case. When a man makes insurance upon a life generally, without any representation of the state of the life insured, the insurer takes all the risk, unless there was some fraud in the person insuring, either by his suppressing some circumstance which he knew, or by alleging what was false. But if the person insuring knew no more than the insurer, the latter takes the risk. When an insurance is upon a representation, every material circumstance should be mentioned, such as age, way of life, &c. But where there is a warranty, then nothing need be told, but it must, in general, be proved, if litigated, that *the life was in fact a good one, and so it may be, though he have a particular infirmity*. The only question is, *whether he was in a reasonable good state of health, and such a life as ought to be insured on common terms?*" The jury, upon this direction, without going out of court, found a verdict for the plaintiff.*

Gout. Again, an insurance had been effected on the life of Sir Simeon Stuart, from April 1, 1779, for one year. The policy contained a warranty that he was about fifty-seven years of age, and in good health on the 11th of May, 1779. He died within the year. The warranty of health was contested, but it appeared in evidence, that although Sir Simeon was troubled with spasms and cramps from violent fits of the gout, he was in good health when the policy was underwritten, as he had been for a long time before. Lord Mansfield, in commenting on the testimony, observed, "*Such a warranty can never mean that a man has not the seeds of a disorder*. We are all born with seeds of mortality in us. A man subject to the gout, is a life capable of being insured, if he has no sickness at the time to make it an unequal contract." The plaintiff obtained a verdict.†

* Park on Insurance, vol. 2, p. 583; *Ross v. Bradshaw*, and 1 Blackstone's Reports, p. 312.

† Park, vol. 2, p. 583, *Willis v. Poole*. In a recent case, (*Swete v. Fairlie*, 6 Carlington and Payne's Reports, p. 1,) the insurer, Mr. Abraham, stated in reply to the usual question concerning diseases, that he was troubled with "occasional indigestion only." This was in 1827. It appeared on the trial, that in 1823, he was seized with depression of spirits, nearly if not quite approaching to insanity. He was not, however, secluded, but took lodgings in the country and came to town every day and attended to business. This after some time restored him to health. His complexion was florid, and there was the general appearance of a tendency to a determination to the head. He died of apoplexy in 1830. It was decided that "a policy of insurance on the life of another person, who at the time of the insurance, is in a good state of health, is not vitiated by the non communication by such person of the fact of his having, a few years before, been afflicted with a disorder tending to

Dyspepsia. In an action brought by the executors of Dr. Watson against the Equitable Insurance Company, to recover a sum insured on his life, the defence was that the deceased had in breach of his declaration to the contrary, a disorder tending to shorten life, and that therefore the policy was void. For the plaintiff, it was proved that Dr. Watson had applied to a physician in Bath for advice, concerning dyspeptic symptoms, and that these, though uncomfortable, do not generally, unless increased to an excessive degree, tend to shorten life, and further that his complaint was not *organic dyspepsia*. Several medical men stated that they had attended him since the policy had been effected, and that he was then quite free of the disorder. On the other side, several medical men stated, that they had seen him at the time of his visiting Bath, previously to effecting the insurance, and that they considered him as a failing man. It was left to the jury to decide whether the patient's complaint was organic dyspepsia, and if it was not, whether the dyspepsia under which he laboured was, at the time of effecting the policy, of such a degree, that by its excess it tended to shorten life. The jury found that it was neither organic nor excessive, and gave a verdict for the plaintiff.

An application was afterwards made to the Court of Common Pleas to set aside the verdict and have a new trial, on the ground that since the insured afterwards died of the same disorder which he had before effecting the policy, that circumstance was conclusive proof that he was then afflicted with a disorder tending to shorten life.

Mr. *Justice Chambre* remarked—all disorders have more or less tendency to shorten life, even the most trifling; as for instance, corns may end in a mortification: that is not the meaning of the clause. If *dyspepsia* were a disorder that tended to shorten life, within this exception, the lives of half the members of the profession of the law would be uninsurable. The application was refused.*

Confinement. In 1815, a case was tried at the Sarum Spring Assizes, where the defence set up was, that a material fact had been suppressed. The person insured was, at the time, upwards

shorten life, if it appears that the disorder was of such a character as to prevent the party from being conscious of what had happened to him while suffering under it."

* 4 Taunton's Reports, p. 763, *Watson v. Mainwairing*.

of sixty years of age, but healthy for that period of life. It was not, however, mentioned in the certificate that at this very time she was a prisoner for debt in the county jail. The judge supposed from the evidence, that by contrivance, the physician had been prevented from stating this fact to the defendants, and therefore directed a nonsuit. But on an application to the Court of Common Pleas, a new trial was directed, on the ground, that although there was nothing express in the terms of the policy which required the imprisonment to be stated, and although everything called for by the office was answered, yet if the imprisonment were a material fact, the keeping it back would be fatal. It ought, however, to have been submitted to the jury, whether this was or was not a material omission.*

The omission to mention the actual medical attendant proved fatal in the case of Col. Lyon. Previous to the execution of the policy, the office sent a number of printed questions to him, among which were the following: "Who is your medical attendant?" He answered, "I have none, except Mr. Guy of Chichester." And "Have you ever had a serious illness?" He answered, "never." Mr. Guy was referred to, and gave it as his opinion, that Col. Lyon was an insurable life. He died in October, 1823, of a bilious remittent fever, and an annuity creditor prosecuted the present suit.

It was proved on the part of the insurance company, that Mr. Guy had not been called to attend him for three years previous to giving his certificate; but that in 1823, Dr. Veitch, a physician, and Mr. Jordan, a surgeon, attended Col. Lyon, from the month of February to that of April, for an inflammation of the liver and fever, and a determination of blood to the head. The former proved that he considered him in a dangerous way, and had prescribed active medicine, and that he would not have certified him to be in health until the end of May. It was, however, agreed on all hands, that the disease of which he died, had no relation to any of the complaints for which these gentlemen attended him. The verdict was for the defendant.†

Consumption. A female with a disposition to this disease, such as cough and emaciation, had been attended by a medical prac-

* 6 Taunton's, Reports, p. 186, *Huguenin v. Rayley*.

† Carrington and Payne's *Nisi Prius* Reports, vol. 1, p. 360. *Maynard v. Rhode*, Secretary Pelican Insurance Company.

titioner for some time immediately previous to effecting an insurance. He, however, did not suppose that structural disease was present, and she was then convalescent. The knowledge of this illness was not communicated to the insurers, and another practitioner, not then in attendance, but who had known her for several years, was sent to examine her, and he stated that she was in ordinary good health. She died, a year after effecting the insurance, of consumption.

Although a verdict had been found for the plaintiff, yet the court ordered a new trial, on the ground that neither the medical attendance, nor the illness had been communicated to the insurers, and that the jury must decide whether this concealment was material.*

Mental Imbecility. The case that I am now to state, excited considerable attention in England, both from the rank of the individual in question, and the medical testimony that was adduced.

In 1824, a policy was effected by the Baron Van Lindenau on the life of Frederick IV., Duke of Saxe-Gotha and Altenburg, in the Atlas Insurance Company. The Duke died on the 11th of February, 1825, and the insurers refused to pay the sum insured for.

On the trial, it appeared that Lindenau had stated in his application, that the Duke was not gouty, asthmatic or consumptive, or subject to fits; that he had never had apoplexy, and that he had no disease tending to shorten life. Two physicians of the Duke certified, that since the year 1809, he had had a dimness of sight from amaurosis in the left eye, and since 1819, had been "*hindered*" in his speech from having had an inflammation of the chest, of which he had been perfectly cured: and they further stated that he was perfectly free from disease, and symptoms of disease. In a communication from an agent in Germany, it was mentioned that the Duke had formerly led a dissolute life, "by which he had lost the use of his speech, and according to some, that also of his mental faculties; which, however, is contradicted by the medical men."

On this the company, instead of asking an ordinary premium of £2 17s. per cent. per annum, required £5 per cent.

* 4 Bingham's Reports, p. 60. Morrison v. Muspratt.

It now, however, appeared, that the Duke had been afflicted with almost a total loss of speech from 1822 to the time of his death, which one of the physicians attributed to local paralysis, and that he had periodical catarrhal affections, accompanied with fever. The chamberlain of the Duke, in his examination mentioned, that he never complained of pain in his head. He ate, drank and slept well, but could not speak. Dr. Dorl, physician to the Duke, agreed that his intellectual faculties were impaired, although his bodily health was good.

On examination after death, no chronic disease was discovered in the viscera or any part of the trunk, but in the head was found a large tumour six inches in length, two in breadth, and one in depth, which not only pressed on the brain, but had depressed the skull at its base. It was inferred that this tumour had commenced in early life.

The defence was, that there had been a suppression of material facts.

Mr. Green, an eminent English surgeon, gave it as his opinion, that from the history of the case merely, there were no symptoms of organic disease. He further thought that the tumour in the skull must, during life, have been in a passive state; and from the appearance on dissection, that it must have been formed in early life. He was only willing to allow that the symptoms mentioned above, would lead to a *suspicion* of disease in the head; and he was disposed to ascribe the difficulty of speech to want of volition, and not to the tumour in the brain. In reply, however, to a question of Lord Tenterden, he answered, "If I, as a medical man, was asked by an insurance company, concerning the state of a man's health, who was unwilling to move, who was subject to control upon his intellect, and who had lost his speech, I should not consider myself at liberty to forbear mentioning these circumstances."

Lord Tenterden, who tried the cause, said this was sufficient; and that he should charge the jury, that if any material facts relative to the Duke's health were concealed, then the policy was void.

The plaintiff elected to be nonsuited, and subsequently made an effort to obtain a new trial, but it was refused.*

* 3 Carrington and Payne's Reports, 353. 8 Barnewall and Cresswell, 586. 3 Manning and Ryland, 45. (Lindenau, v. Desborough.) On the medical testimony, and

Diseased kidney. Mr. Chitty mentions the case of *Simcor v. Bignold*, tried in 1832, for a life policy effected in 1827, with the usual declaration that Bird was not affected with any *disease tending to shorten life*. Bird died in January, 1831; and on dissection, it was found that a large fungous tumour weighing two pounds four ounces, occupied the place of the left kidney. Some of the witnesses were of opinion that it must have been of five or six years growth, and that it was an *incurable organic disease*. The bladder was also diseased, but otherwise the rest of the body was in a healthy state. Mr. Bird had been medically treated for symptoms of his disease, as far back as 1825 or 1826. The cause ended in a compromise, by the defendant's refunding the premium received.*

Habits of intoxication. Two cases in which it was proved that the knowledge of these was concealed from the insurers, although the individuals in question were at the time apparently hale and healthy, have been decided against the plaintiffs.† It was urged,

particularly Mr. Green's, which is severely criticised, see *Medico-Chirurgical Review*, vol. 14, p. 213; and *London Medical Gazette*, vol. 2, p. 669.

* Chitty's Medical Jurisprudence, Part 1, p. 235.

† 6 East's Reports, 188. *Aveson v. Lord Kinniard and others*. 5 Bingham's Reports, 503. *Everett v. Desborough*.

In a third case of a similar nature, although the Judge (Lord Denman) charged the jury for the defendant, the verdict was in favour of the plaintiff. *London Med. Gazette*, vol. 21, p. 549.

There are some additional English cases, more recent than any noticed in the text, the substance of which may here be briefly given.

Chattock v. Shauce. Col. Greswolde made an insurance on his life and died in two years thereafter. The Company resisted payment on the ground that the Colonel had been intemperate, and also had epileptic fits, and that these facts had been concealed from them. On these points, there was great diversity of testimony. The verdict was for the plaintiff. Lord Abinger charged the jury that all that was required to be considered was, whether it was satisfactorily proved, that the Colonel had been subject to fits, and accustomed to intemperate habits *before* the policy was issued. It was not sufficient to vacate the policy, if an epileptic fit had occurred in consequence of an accident. It must be shown that the constitution either was naturally *liable* to fits, or by accident or otherwise had become so liable. *London Med. Gazette*, vol. 16, p. 554, 607. *London Med. and Surg. Journal*, vol. 8, p. 112. *American Jurist*, vol. 18, p. 419.

Fisher v. Beaumont. This was tried at York in July, 1835. The judge told the jury that the question was, whether the individual laboured under any disease likely to shorten life, when the policies were effected,—whether insanity was that disease, and if so, whether it had a tendency to shorten life. There was a verdict for the plaintiff.

In this case, the presence of insanity was proved, and all the medical witnesses except one, swore that they did not think it had a tendency to shorten life.

A correspondent of the *London Medical Gazette* objects to this, and quotes Lawrence in proof that the brains of maniacs show more or less of disease. On the other hand, the long life of many of the insane is urged. It is evident that we need statistical tables from lunatic asylums to settle the point. *London Med. Gazette*, vol. 16, p. 660.

in one instance, that the warranty was only against any *disorder* tending to shorten life, and not against pernicious *habits*. Here, however, the reference to the regular medical attendant had also been omitted.

Opium eating. Professor Christison has directed the attention of the profession to the effects of this on health and longevity. His was particularly called to it by the following case.

In 1826, the late Earl of Mar effected several insurances on his life in various offices, and among these, one in the Edinburgh Life Insurance Company for the sum of £3000. This was held by a banking-house in Edinburgh, as a security for debt. He died in September, 1828, of jaundice and dropsy; and the company then learnt that he had been for years in the habit of taking laudanum to excess; and instead of being, as was represented, temperate and active, that he had drank to excess, and led a very sedentary life. They refused to pay, and a suit was instituted.

It is not necessary to go into a detail of the evidence, further than to state, that on the one side, the manifest change in his health and spirits in 1827, was ascribed mainly to his depressed pecuniary situation, which he then discovered to be very low.

On the part of the company, it was proved that he had been in the practice of taking laudanum for thirty years, and in large quantities. He used to take a table spoonful at a time on going to bed, and often also when going out to walk, &c. They contended that this was a "habit tending to shorten life." He appears also to have been subject to rheumatism and stomach complaints, previous to effecting the insurance.

The charge of the chief commissioner was in favour of the plaintiffs, principally, as it would seem, on a technical ground, implying that the insurance company did not make the inquiries relative to his health with the care usually observed, and there-

Wainwright v. Bland. The details of this case I have taken from the London Morning Herald of June 30, and December 4, 1835, which I received through the kindness of my friend, Mr. Balmanno, of Geneva. See, also, London Med. Gazette, vol. 16, p. 554, 606. Miss Abercrombie, the person insured, was so indigent, as to petition for a pension of £10 per annum, and yet her life was insured to the amount of £11,000. She died very suddenly, in consequence, as was asserted, of indigestion, owing to a hearty supper, after walking home with wet feet from the theatre. No proof of poison was found. There were two trials. In the first, the jury could not agree, and in the second, their verdict was for the defendant, and very justly, I apprehend. From some private information that I have received, I entertain a strong suspicion that the death in question was hastened.

fore were to be understood as accepting the life at a venture. He also appears to have entertained doubts whether the habit was carried to such an extent, or at all events that it was so important a circumstance as to render it necessary for Lord Mar to reveal it. The jury agreed with him in their verdict,* but on an appeal to the Court of Session, it was set aside and a new trial was granted March 9, 1832. The Lord Chief Commissioner observed, that "it was a verdict without due and sufficiently deliberate consideration of the evidence." The parties finally compromised the case.†

Having collected, I believe, most of the English cases on this subject, I will conclude with the narrative of one that occurred in France.‡ It relates to *Annuities*, modified by the peculiar provisions of the French code.

Article 1974, of the *Civil Code* enacts, that "a contract for an annuity on the life of a person dead the same day on which the contract is signed, is void."

Article 1975 extends the same provision to the case of a person *affected with a disease, of which he dies within twenty days after the passing of the contract*. It is to this last, that the case is particularly referable.

The Sieur Fried, residing at Strasburg, and aged upwards of sixty, sold on the 11th of March, 1809, a large sum in the funds, for the purchase of an annuity on his own life. He was, at the time of the bargain, and had been for ten years, afflicted with hemiplegia, in consequence of an apoplectic seizure, and he died, on the second day after signing the contract, of an attack of apoplexy, excited by an altercation. The question was, whether M. Fried, on the day when he signed the papers, was or was not already under the influence of the disease to which he fell a victim thirty hours afterwards? or in other words, whether the ten years' hemiplegia and the apoplexy did not constitute one and the same disease?

The following is an abstract of the testimony presented. A hair-dresser deposed that he had dressed M. Fried for upwards

* Edinburgh Medical and Surgical Journal, vol. 37, p. 123. Christison on Poisons, p. 626, 2d edition. I shall notice this subject more in detail when speaking of opium as a poison.

† Forbes & Co. v. Edinburgh Life Assurance Company. Cases in the Court of Session, vol. 10, p. 451.

‡ Two other cases of some interest, connected with this subject, will be more appropriately noticed in subsequent chapters—one relating to the point, whether a drowning was accidental or suicidal; and the other, whether apoplexy or taking opium had been the cause of death.

of two years; who, during that time, had been repeatedly seized with apoplectic attacks: that Fried had, for a long time, been paralytic of the right side, and was obliged to write with his left hand. The day after the new year, the deceased suffered a severe attack of apoplexy, and this recurred several times till his death. His strength gradually failed, so that he was unable to go out and pay his usual visits.

Dr. Schweighauser stated, that he had long known Fried, and that the paralysis arose from an attack of apoplexy. He did not, however, attend him professionally until March, 1808, when he was called in consequence of an apoplectic stroke. He treated him during ten or fifteen days, and left him as well as he was before his illness. In January, 1809, he was again called on the same account. This yielded readily, and he attributed both to slight indigestion. In March, however, he found, on being summoned, that the attack was more serious; stertorous breathing was present, and death soon followed. On inquiry, he ascertained the immediate cause of this last seizure to have been a violent fit of passion.

Some of M. Fried's servants deposed that his mind was impaired, particularly since January: that he walked and spoke with difficulty; that his hearing was affected, and that the attacks of apoplexy were very frequent; sometimes one every two days.

On the other hand, Lacombe, a notary, stated, that early in March, he had a conversation with Fried relative to the contract which he was about making, and received his directions thereon; that his mind appeared sound, nor did he seem ill, but walked about and sat down apparently with ease. Other witnesses agreed that his intellect was unimpaired.

The case was, by order of the court, submitted to the examination of the Professors of the Faculty of Medicine at Strasburg and Montpellier, and also to sundry professors and physicians at Paris. As is usual, they differed.

The Strasburg physicians were of opinion, that Fried was affected with the disease of which he died on the day of signature. Their arguments may be stated as follows:

Apoplexy, independent of the symptoms which constitute the attack, has certain precursory symptoms, as well as concomitant and subsequent ones. To the last belong hemiplegia, affected senses, weakness of mind, &c. All, however, are referable to

the same cause. Apoplexy may be styled the acute form of the disease, and palsy the chronic ; and from the slightest excitement, as passion, for example, the chronic will suddenly become acute. They in fact only differ as to the degree of intensity, and hemiplegia always terminates in a fit of apoplexy. It is also asserted as a sound maxim, that a disease is not removed until the symptoms characterizing it have disappeared ; and the professors apply it to the present case, by observing that hemiplegia is one of the principal elements of apoplexy.

The Professors at Montpelier, in their consultation, totally reject the idea of apoplexy and palsy being the acute and chronic forms of the same disease. Paralysis is a consecutive and permanent state ; apoplexy a primitive and temporary one. As to paralysis being an element of apoplexy, this would be to suppose that there could be no apoplexy without paralysis—when the contrary is undoubtedly true. And again, paralysis arises from many other causes besides apoplexy.

In this case, it is granted that there was a predisposition to apoplexy, induced by the paralysis, but predisposition to a disease does not carry with it the idea of its actual presence ; many causes may annihilate the predisposition ; and even, if present, a foreign cause, as in this instance, may be necessary to excite the complaint.

Marc, Chaussier, Desgenettes and Renauden constituted the Parisian board of reference. They agree in opinion with those of Montpelier.

They observe that palsy consists in a lesion of the nerves of motion and sensation ; apoplexy in a suspension or abolition of sense. Hence different organs are necessarily affected in each. There is no such disease as chronic apoplexy, since death must follow a prolonged attack, but paralysis may occur in three ways—independent of apoplexy, as from compression, section of nerves, &c.—as an *avant-courier* of apoplexy, and lastly and most commonly, as a consequence of it.

Was it the latter in this case, and if so, the consequence of a disease the disease itself ? The remark, that the symptoms must be removed before the complaint can be considered as cured, does not apply here. He had no symptoms of apoplexy, and the different attacks of it, so far from proving a continuity of the same disease, directly indicate the contrary. Every seizure is an independent affection, arising from a particular organic de-

rangement, and this derangement must occur, in order to produce a second. How then can paralysis be called chronic apoplexy?

The mind of the deceased, from the most intelligent testimony, appears to have been sound. Even those, who question it, rather speak of loss of memory, than of the more essential functions being impaired.

The professors conclude by giving their opinion—1, that Fried was of sound mind when he made the contract; 2, that he was *predisposed to apoplexy* at the above period; and 3, that the fatal disease did not exist at the indicated time, but was excited by an occasional cause, operating on the predisposition.

From grave consultations prepared in the closet, and submitted to the legal tribunals of the country, the controversy was transferred to the medical journals of Paris. Sedillot and Marc were the principal combatants. The most striking remark of the former is—that the effects of a disease require curative treatment, while the predisposition only calls for preventive. Hence, in applying this to the present subject, he considers paralysis as an *epiphænomon* (a super-added symptom) of apoplexy. The latter is barely cured, and its effects remain.*

In an examination made some years since of this case, I felt strongly inclined in favour of the opinion of the Strasburg physicians.† The subsequent publication of Marc suggests, however, some additional points which have considerable weight.‡ One of the strongest arguments adduced by him is, that the opposite construction would render an individual like Fried, totally incapable of making a contract during the last ten years of his life. The article (says he) was framed to prevent an advantage being taken of a person labouring under what are by common consent called acute diseases, or else it would not have been restricted to twenty days. The disease should be continuous, and it is not correct to apply this enactment to a case where this is an intermission of disease, with supervening attacks.

It had been endeavoured in the course of the controversy, to

* All the papers, opinions and discussions relative to this case, were collected and published by Dr. Ristelhueber, in an octavo volume, in 1821, entitled "Rapports and Consultations de Medecine Legale."

† New York Medical and Physical Journal, vol. 5, p. 40.

‡ Commentaire Medico legal sur l'Article, 1975, du Code Civil, par M. Marc, in Annales D'Hygiène, (1830) vol. 3, p. 161.

assimilate this case to one of hemoptisis, the first attack occurring, for example, on the day of signing. This is removed, and the patient has no return of it, but apparently is well. On the nineteenth day, however, he has another, and dies. Does this invalidate the contract? Orfila said not.* Marc, however, is willing to qualify this. If the hæmorrhage arises from an *occasional* cause, and a full and perfect intermission has occurred, he will agree to the above opinion, but if it be shown to originate in a tuberculous state of the lungs, and thus prove to be the symptoms of an *essential affection*, the contract is void. If it be replied that the analogy is close between this and Fried's case, since both paralysis and apoplexy arise from lesions of the brain, the objection is met by denying that the same pathological state occurs in each, and also by the fact, that the attacks of apoplexy had preceded the time of signing of contract. The article in question requires that the individual should labour under the particular disease at this very period.

It is evident, however, that Professor Marc has some scruples. He suggests the necessity of dissection in these instances, and intimates that an alteration of the article might perhaps be proper, so as to enact that a contract shall be void, if signed by a person labouring under a disease actually the same (*qui a été individuellement la meme*,) as that of which he dies within twenty days.

In concluding the notice of this subject, the importance of which must be my apology for prolixity, I cannot avoid expressing a wish that the custom of obtaining life insurances and annuities may become more prevalent with us. This is not the place to insist on their importance to the happiness of individuals. I will only say, that experience has fully demonstrated their value in other countries. When offices of this nature shall be generally established, physicians and surgeons will be called upon to act in their appropriate stations. Let them recollect that their opinions are in all cases reviewed by intelligent and acute bodies of men, and that their medical reputation may be exalted or diminished, according as they perform their duty. Above all, their acts may, as in several of the above cases, be submitted to a jury of their country. The concealment of material facts, or ignorance of them, may prove a source of unceasing regret.†

* Leçons, vol. 1. p. 457.

† Medico-Chirurgical Review, vol. 14, p. 123.

CHAPTER XIII.

MENTAL ALIENATION.

1. Of the symptoms that constitute a state of insanity. Division of insanity into mania—monomania—dementia—idiotism—moral insanity. *Mania*. Precursory symptoms. Symptoms—state of the countenance—language and actions—disordered appetite—state of the stomach and bowels—condition of the tongue and pulse—insensibility to cold and heat; how far this is correct—perversion of the senses, or *illusions*: the ear; the eye; the smell; taste and touch—wakefulness—loss of memory—pusillanimity—aversion to friends. Duration of a paroxysm. *Monomania*—its nature—gayety of some; melancholy in others—danger of suicide or violence from the insane of this class. The age most liable to melancholy monomania—its symptoms—peculiar cast of countenance—state of the eye—bodily symptoms—concentration of thoughts on one idea—general sanity on subjects not connected with the morbid impression—unwillingness to admit any evidence unfavourable to the delusion—length of time that it may remain. Age most liable. Incoherent madness of Dr. Prichard—its characters. *Dementia*—generally a consequence of mania and monomania—its characters—may be idiopathic. Hoffbauer's modifications of it into imbecility and stupidity. *Idiotism*. Its frequency in some countries. Cretins. Characteristics of idiotism—form of the head and face—affection of various senses—complication with other diseases. *Moral insanity*. Nature of this—its subjects very liable to commit acts of violence. Enumeration of the most common causes of mental alienation. 2. Of feigned and concealed insanity. Rules for their detection. Instances of both. Cunning of the insane in eluding detection. 3. Legal definition of a state of mental alienation, and the adjudications under it. Common law of England as to idiots and lunatics in civil cases. Introduction of the term *unsoundness of mind*—the meaning of it according to Lord Eldon and others—used in our own statutes—attempt to give a strict definition to it. Cases—Mr. Davies—Miss Bagster. English law as to criminal cases—French law—law of the State of New York. Method of proving a person a lunatic—method of proving his recovery. Distinctions made in the law between civil and criminal cases. Lucid interval—ancient meaning of this term—present definition of it by lawyers and physicians—restriction of its meaning in criminal cases. Responsibility of the insane in criminal cases—ability to judge between right and wrong—what this means, and how it should be considered. Cases showing the construction put on it. Scotch law on this. Great difficulty in discriminating between crime and partial insanity—whether those who are proved to have been previously insane, should be exempted from responsibility—arguments in favour of this. Cases—Dean—Howison—Papavoine. Moral insanity. Cases illustrating its nature—Henrietta Cornier. Characters distinguishing it from crime—danger of extending it too far—cases referred to it in the United States. 4. Inferior degrees of diseased mind—delirium of fever—hypochondriasis—hallucination—epilepsy—nostalgia. Intoxication—its presence does not excuse from the guilt of crimes—a frequent cause of insanity. Delirium tremens, an insane state of mind—its presence should relieve from responsibility—characters of this disease—its temporary nature—cases. Old age. 5. Of the state of mind necessary to constitute a valid will—legal requisites—nuncupative wills—wills disposing of personal property—testaments. Persons who cannot make valid wills. Diseases which incapacitate. Law cases in which various states of mind have been urged against the validity of wills. 6. Of the deaf and dumb—their capacity, and the morality of their actions—are to be judged of according to their understanding. A person born deaf, dumb, and blind, is deemed an idiot, if he become so, a *non compos*. A deaf and dumb person may be a witness—may obtain possession of real estate—may be tried for crimes. Cases of each.

I HAVE chosen the term mental alienation, at this time, simply because it is more comprehensive than others in common use.

Were not the words *unsoundness of mind* employed at the present day in a technical sense, they would probably be preferable for the object in view. And this is to consider under one title all those diseased states of mind, which occasionally require the investigation of the medical jurist.

In examining the subject of insanity, I propose to confine myself to those points, which are particularly noticed in civil and criminal cases, as it would neither comport with the limits of the work, nor the objects for which it is prepared, to extend the research over that broad field which is usually occupied by the medical pathologist. And we shall find that the symptoms are the important subject of inquiry, since a decision is usually founded on the estimate formed of them.

I shall accordingly arrange my remarks in the following order:

1. The symptoms that constitute a state of insanity.
2. Of feigned and concealed insanity.
3. Of the legal definition of a state of mental alienation, and the adjudications under it.
4. Of inferior degrees of diseased mind.
5. Of the state of mind necessary to constitute a valid will.
6. Of the deaf and dumb—their capacity, and the morality of their actions.

1. *The symptoms that constitute a state of insanity.*

Insanity, in its ordinary acceptation, is usually divided into mania, melancholia, and idiocy; but I prefer the classification proposed by M. Esquirol, as better calculated to illustrate the varied appearances of the disease. The following is the order pursued by him. 1. Mania, in which the hallucination extends to all kinds of objects, and is accompanied with some excitement. 2. Monomania, in which the hallucination is confined to a single object, or to a small number of objects. 3. Dementia, wherein the person is rendered incapable of reasoning, in consequence of functional disorder of the brain, not congenital. 4. Idiotism, congenital, from original malconformation in the organ of thought.*

* *Medico-Chirurgical Review*, vol. 1, p. 249, *American edition*. This is an analysis of the masterly article of Esquirol on insanity, in the *Dictionnaire des Sciences Médicales*.

The above division, although modified and improved by Esquirol, was originally presented by Pinel. The term *monomania* was, however, introduced by the former.

After describing these in as succinct a manner as possible, I shall lastly notice a form of disease, which is now frequently characterized by the name of *moral insanity*.

Mania. In many instances, though it is far from being general, pain in the head and throbbing of its arteries precede an attack of insanity; and sometimes giddiness is complained of, as a precursory symptom.* The appearance of the eye is, however, the circumstance most readily to be noticed, and the change in it from a state of health, even precedes incoherence of language. Recovered patients have described a peculiar sensation connected with this appearance, as though the eye flashed fire from being stricken smartly with an open hand, and this increased in proportion as the ideas became more and more confused. There is a peculiar muscular action of these organs, a protrusion of the eyes, a wandering motion, in every possible direction, and in a manner peculiarly tiresome to the beholder. During a paroxysm they appear as if stiffly and firmly pushed forward, and the pupils are contracted.† And yet with all these appearances of excitement, it has rather a dull, than a fierce character.‡

The muscles of the face, also, partake in the change, and the rapidity of the alterations they undergo, depends on the succession of ideas which pass with such velocity through the mind of the sufferer.

As the attack advances, the individual becomes uneasy, is unable to confine his attention, walks with a quick and hurried step, and while doing so, suddenly stops. Men of the most regular and established habits, will suddenly become active, jealous and restless; they abandon their business and enter into the most extravagant undertakings, while, on the other hand, some who naturally are of a lively disposition, become indolent and indifferent, fancy themselves sick, or have a presentiment of severe disease. Persons subject to habitual indisposition, which

* Haslam on Madness, p. 41.

† Hill, p. 68. "It is curious (says Dr. Burrows,) that in many persons predisposed to insanity, the iris is so black that it can scarcely be distinguished from the pupil. The melancholic have generally blue or gray eyes." (Commentaries, p. 283.)

‡ "I have observed (contrary to my expectations,) that there was not that energy, that knitting of the brows, that indignant brooding and thoughtfulness in the face of madmen, which is generally imagined to characterize their expressions, and which we almost uniformly find given to them in painting. There is a vacancy in their laugh, a want of meaning in their ferociousness." (Charles Bell on the Anatomy of Painting, Edinburgh Review, vol. 8, p. 376.)

has disappeared suddenly, fancy themselves in high health, and are greatly elated.* A very vigorous action of body and mind soon takes place, and particularly the exertion of great muscular strength. And here, it is impossible to present any thing like a description that shall be generally applicable. The language is totally different, both in tone and manner from the usual habits of the maniac. He becomes angry without any assignable cause—attempts to perform feats of strength, or efforts of agility, which shall strike the beholder with astonishment at his great powers. Many talk incessantly, sometimes in the most boisterous manner, then suddenly lowering their tone, speak softly and whisper. The subjects vary equally. They are never confined long to one point, but voluble and incoherent, run rapidly from one thing to another, totally disconnected with it. The same phrase is sometimes repeated for a length of time, or conversation is maintained with themselves, as with a third person, with all the variations of violent, and ridiculous gestures. In females, there is frequently a complication, as it were of hysteria, with general madness, and laughing or weeping is a common attendant.†

The food necessary for the sustenance of life is often neglected, and fasting is endured for a length of time without any apparent inconvenience, yet with some, there is an unusual and indiscriminate voraciousness, and they swallow every thing that may come in their way.

The stomach and bowels are usually torpid—costiveness prevails, and the stools are white, small, and hard. Diarrhœa rarely occurs except towards the termination of the disease. The urine is scanty in quantity, and for the most part, of a high colour.

The pulse is very various, sometimes full and labouring, and sometimes natural; and I apprehend that but little dependence can be placed on it as an indication. Its condition is, however, worthy of notice. Of 89 females, examined at La Salpetriere, by Leuret and Mitivie, the pulse was above 100, in only 7; in

* Parkman. I am greatly indebted, in this chapter, to the publications and MS. communications of this learned and diligent examiner of the subject of insanity.

† Rush, p. 145. It is a remark of Esquirol, that in female maniacs the sense of delicacy is obliterated. Dr. Knight, (p. 123,) however, states that he has rarely observed this.

10, it ranged from 90 to 99; in 38, from 80 to 89, in 29, from 70 to 79; in 4 from 60 to 69, and in 1, it was under 60. This was in summer. In winter, the results were generally similar. And in each case, according to these observers, the frequency of the pulse decreases gradually in mania, monomania, and dementia; the mean pulsation in the latter being between 70 and 80.* The tongue is usually moist, and sometimes has a whitish appearance, and there is often a preternatural secretion of saliva and mucus in the mouth and throat, which is of a viscid nature, and discharged with difficulty by spitting. According to Esquirol, maniacs are frequently tormented with great thirst. There is also generally a stoppage of the secretion of mucus in the nose. Dr. Rush mentions, that Dr. Moore, at his request, examined the maniacs in the Pennsylvania Hospital, with reference to this symptom, and found it present in two-thirds of them. Where this secretion was not suspended, he found the mucus of the nose dry and hard.†

Maniacs are generally deemed capable of enduring high degrees of heat or cold without suffering. This, however, is incorrect, if we are to credit the united testimony of Haslam and Esquirol. During a paroxysm, indeed, they are insensible to either, and particularly to cold, but they suffer like the sane. Mortification of the feet is a common occurrence, and some indeed die from the effects of a low temperature, during the winter, if not properly secured. It is suggested by Esquirol, that the great internal heat which some experience, may explain their voluntary exposure.‡

The senses are often perverted, constituting what we commonly call ILLUSIONS.§ The *ear* more particularly suffers. Has-

* De la Frequence du Pouls chez les Alienes, &c. par F. Leuret, Medecin de l'Hopital de la Reserve, et F. Mitivie, Medecin de l'Hospice de la Salpetriere, &c. 8vo. Paris, 1832.

† Rush, p. 146.

‡ Haslam on Madness, p. 84. Dictionnaire des Sciences Médicales, vol. 30, art. Mania. Dr. Morrison defines them as follows: "Illusions are dependant on the state of the organs of sense; hallucinations on that of the intellectual organs," (p. 35.) Esquirol who has written on both, makes a somewhat similar distinction illustrating the latter, (in which the brain only is excited,) when it relates simply to the remembrance of the sensations of sight, by what is commonly called a *vision*, or the appearance of apparitions, while the former originates from the senses. When, however, he proceeds to characterize illusions particularly, he refers them to two

§ An attempt has of late been made to distinguish this term from that of *hallucination*. Dr. Morrison defines them as follows: "Illusions are dependant on the state of the organs of sense; hallucinations on that of the intellectual organs," (p. 35.) Esquirol who has written on both, makes a somewhat similar distinction illustrating the latter, (in which the brain only is excited,) when it relates simply to the remembrance of the sensations of sight, by what is commonly called a *vision*, or the appearance of apparitions, while the former originates from the senses. When, however, he proceeds to characterize illusions particularly, he refers them to two

lam observes, that he scarcely recollects of a lunatic becoming blind, but numbers are deaf; and those who are not deaf, are troubled with difficulty of hearing and ringing in the ears. It is from the disorder of this organ, and which is referable to the original diseased action of the functions of the brain, that many maniacs derive the delusion under which they labour. The commission which they suppose themselves to receive from some superior being, is given by the ear—they imagine it constantly repeated. They are thus, they imagine, urged to its performance, and in too many cases, murder or self-destruction is the unhappy result. "In consequence of some affection of the ear, the insane sometimes insist that malicious agents contrive to blow streams of infected air into this organ. Others have conceived, by means of what they term hearkening wires and whizz pipes, that various obscenities and blasphemies are forced into their minds; and it is not unusual for those who are in a desponding condition, to assert that they distinctly hear the devil tempting them to self-destruction."*

The *eye* is also diseased. Indeed, as Esquirol remarks, it is as much so as any other sense, since it is the principal organ of communication with external objects. It is a common circumstance to mistake various substances or persons. Their appearance to the maniac is various—sometimes fiery and bright, and in these instances, the eye itself is sparkling and protruded. To the changes thus produced in this organ may be ascribed the passion that some have for collecting sparkling objects, as pebbles, glass, &c.

Relief has sometimes been experienced by the temporary use of a bandage over the eyes. The unnatural excitement is thus mitigated.†

causes, and one a disordered state of the brain, and acknowledges, that the understanding and the passions concur in producing them. See his *Essay* translated by Liddel.

* Haslam on Madness, p. 69. A curious case is mentioned by our author, (p. 71.) of a patient, who was a well educated man of middle age. He always stopped his ears closely with wool, and in addition to a flannel night-cap, usually slept with his head in a tin sauce-pan. Being asked the reason why he so fortified his head, he replied, "to prevent the intrusion of the sprites." He was apprehensive that his head would become the receptacle of these imaginary formations; that they would penetrate into the interior of his brain, become acquainted with his hidden thoughts and intellectual observations, and then depart and communicate to others the ideas they had thus derived. "In this manner," said he, "I have been defrauded of discoveries that would have entitled me to opulence and distinction, and have lived to see others reap honours and emoluments for speculations which were the offspring of my own brain."

† Esquirol, p. 22.

On the other hand, there are many cases in which the eye is sunken and dull, and external objects produce but little impression.

The *smell* does not escape perversion, though this is by no means so common as with the other senses. A lady twenty-seven years of age, in the last stage of consumption perceived in her room the odour of charcoal. She immediately conceived that there was a design against her life. She left her lodgings, but the fumes of charcoal incessantly pursued her till her death.

This depraved state often leads to an abhorrence of food, and a danger of starvation.

The derangement of the *taste*, however, is the principal agent in this, originating most commonly in an unsettled state of the stomach, and accompanied with a furred tongue and a parched mouth.*

The *touch* in many instances, loses its peculiar power of correcting the other senses. The skin is occasionally hot and dry, or extremely sensitive, and even if these conditions be wanting, the sense is so far perverted, that the insane frequently deceive themselves in respect to the size, form, and weight of things around them, and the greater number become unhandy in all mechanical occupations, music, writing, &c.† This, however, is far from being universal, as some speak and write with ease, and are remarkable for striking expressions, deep thoughts, and ingenious associations.

Wakefulness is another symptom, which sometimes precedes all others, and is coeval with pain or uneasiness of the head, or

* Sometimes the TASTE preserves its power, as in the following case, related by Sir Walter Scott, who, with Shakspeare, may be considered as the two master spirits in describing the various phases of insanity. I will only refer to Hamlet and Lear, to Madge Wildfire and Clara Mowbray. "A late medical gentleman, my particular friend, told me the following case of a lunatic patient confined in the Edinburgh Infirmary. He was so far happy that his mental alienation was of a gay and pleasant character, giving a kind of joyous explanation to all who came in contact with him. He considered the large house, numerous servants, &c. of the hospital, as all matters of state and consequence belonging to his own personal establishment, and had no doubt of his own wealth and grandeur. One thing alone puzzled this man of wealth. Although he was provided with a first-rate cook and proper assistants, although his table was regularly supplied with every delicacy of the season, yet he confessed to my friend that by some uncommon depravity of the palate, every thing which he ate *tasted of porridge*. This peculiarity, of course, arose from the poor man being fed upon nothing else, and because his stomach was not so easily deceived as his other senses." (Note to the Pirate.) Dr. Young relates the same story in an early volume of the *Quarterly Review*, vol. 2, p. 152.

† *Medico-Chirurgical Review*, vol. 1, p. 246.

of some other diseased organ; and its degree is determined by the age, habits, situation, and original vigorous or feeble constitution of the patient. From its being always followed in the morning by the peculiar appearance of the eye already described, it may sometimes lead to proper suspicion, as well as attention to the diseased person. This watchfulness is attended with an irresistible impulse to rise early, go abroad, and ramble about; or if remaining in the house, to be incessantly employed in arranging, and re-arranging articles of furniture, dress, books or papers; and by thus placing, displacing and confounding every thing, their ideas become more confused, and they soon give rise to actions of the wild and outrageous nature which we have already described.

The memory is early affected in maniacs. After a time, it seems to be almost destroyed. Some, according to Haslam, lose, in a wonderful degree, their former correctness of orthography.

Pusillanimity is also a remarkable trait in the character of the insane. Though occasionally boisterous and fierce, yet they are readily overcome by a person of decision. Their leading characteristics are timidity, distrustfulness, suspicion—never contented with their present condition, but always desirous of some change. It is this discontent of mind that detaches them from their parents and friends, and causes them to hate most, those whom they previously cherished with the fondest affection. The exceptions to this are few, and even if they retain the semblance of affection, still they will bestow no confidence on the objects of it, nor pay any respect to their solicitations or advice. This alienation from friends is therefore one of the most constant and pathognomonic traits of the malady. And frequently the first favourable symptom is a diminution of the constant discontent.*

The duration of a paroxysm is very various. It continues for days, weeks, months, and even years, and ends in death—a state of fatuity—a remission—or a perfect and durable recovery. Dr. Rush states, that in one case which came under his notice, the disease continued from June, 1810, until April, 1811, with scarcely any abatement in the excitement of the body and mind, notwithstanding the patient was constantly under the operation of delecting remedies. He also witnessed another instance, in which

* *Medico-Chirurgical Review*, vol. 1, p. 247. Knight, p. 14.

the same remedies were insufficient to produce an interruption for five minutes, of speech or vociferations, except during a few short intervals of sleep, for five months.* Others again have paroxysms with chronic but moderate derangement in their intervals; and in these intervals, the recovery is sometimes so great as to indicate insanity on a particular subject only. But a reference to this will readily excite a return of general madness.

If the paroxysm ceases suddenly, we have reason to dread the return of another. On its cessation, the patient seems waked from a dream, he is exhausted, speaks or moves but little, and seeks solitude; and if there is an approach to reason, he states what he has seen, heard or felt—his motives and his determinations.†

Monomania. Here the permanent delirium is confined to one object, or to a small number of them. The sufferers are pursued day and night by the same ideas and affections, and they give themselves up to these with profound ardour and devotion. They often appear reasonable, when conversing on subjects beyond the sphere of their delirium, until some external impression suddenly rouses the diseased train.

The character of this form of insanity is very various, and depends on the predominant species of delusion that is present. It is hence divided into several varieties. Some are gay and highly excited—laugh, talk and sing—fancy themselves deities, kings, learned and noble. Cases of this nature must be familiar to every reader. Foderé mentions one which is strikingly illustrative. A merchant at Marseilles, aged seventy, and always a decided royalist, had devoted himself to heraldic researches. He was so overjoyed at the return of the Bourbons to France, that he became insane. His predominant mania, was to recite with a loud voice, the history of the kings of France, and to fatigue his auditors with a tedious catalogue of chronological facts. If they listened with patience, he was contented and calm, but if any impatience was manifested, his fury became ungovernable.‡

Some patients, when suffering under this form, are excessively

* Rush, p. 162.

† Parkman. "The convalescence from insanity, differs from convalescence from common disorders, in being sometimes suddenly and unexpectedly commenced; but it is often very feebly and imperfectly declared. Intermissions of sanity and insanity may be observed for weeks, or for months." (Conolly on Insanity, p. 26.)

‡ Fodere, *Traité du Délire*, vol. 1, p. 385.

irascible, and even without any apparent cause, are suddenly hurried into a violent passion or fury. It is while labouring under this, that they become dangerous to themselves or to those around them. They will seize any weapon, and strike and injure others or themselves. Sometimes consciousness of their situation is so far present, as to allow them to warn individuals of their danger, or to intreat them to prevent their doing injury. An internal sensation is perceived—as a burning heat with pulsation within the skull, previous to this excitement.* This description of lunatics “eat much, but sometimes they endure hunger with great obstinacy; they have frequent pains in the bowels, and costiveness is common. The pulse is full, hard and strong, and the skin warm.”†

Probably this is a form of insanity as common as any other. It is also said to be less durable, and to end more favourably.

Melancholy, which is another form of monomania, is a disease of mature age, and rarely affects young and athletic persons. It is also generally characterized by a peculiar appearance, and particularly by black hair and eyes—by a striking cast of countenance, as the complexion is either yellow, brown, or blackish. This is to be ascribed to a sluggishness and torpor of the cutaneous system, and in consequence, the impressions of cold and heat are slightly noticed, and sometimes not heeded. The physiognomy is wrinkled and languid, yet sometimes the muscles of the face become convulsively tense, and the countenance is full of fire.

The pupils of the eye are dilated, and that organ has a peculiarly dull muddy look, rolling heavily on surrounding objects, if it can be roused to move at all. But ordinarily it is fixed with an unmeaning stare on vacancy. The adnata is commonly painted with a dull purplish red, sometimes on a deep orange-coloured ground, and this especially, when advancing age and hepatic affections exist, or intemperance has long preceded the attack. Holding a strong light near the eyes, produces a very transient effect.‡

Pain is said by some recovered patients to have preceded the

* Others again refer the pain to the presence of some animal in the brain—the stomach, or some other organ, and not unfrequently it has its origin in real disease. An insane woman, who said she had an animal in her stomach, died at Salpetriere. Esquirol opened her, and found a cancer of that viscus. (Page 10.)

Parkman.

‡ Hill, p. 98.

attack—sometimes fixed, but more commonly wandering, and the suffering by this is extreme. Great apprehension, which indeed is a characteristic of this form, ensues, and plunges the sufferer into the most gloomy state of mind, accompanied by indifference as to his personal comfort, or urging him forcibly to self-destruction, or to the murder of others. The state of revery and delusive ideas, gradually becomes more fixed, and the thoughts are concentrated on one mournful topic, until finally he is, as it were, inanimate, motionless and speechless. A fixed position of the body is a very common attendant. In one instance, that occurred to Dr. Rush, the patient sat with his body bent forward for three years without moving, except when compelled by force, or the calls of nature. In another, the sufferer occupied a spot in a ward, an entry, or in the hospital yard, where he appeared more like a statue than a man. Such was the torpor of his nervous system, that a degree of cold so intense as to produce inflammation and gangrene upon his face and limbs, did not move him from the stand he had taken in the open air.*

The pulse is extremely vacillating, and generally is slow and feeble, yet with all this, has a labouring feel, not accompanied with a bold throb, but as though difficulty attended every exertion. A sort of ticking movement is sometimes observed, which is often intermitting and giving from one hundred to one hundred and thirty strokes in a minute.†

The skin is dry and burning, while the extremities are cold, and bathed in a clammy sweat.‡ With these, transient purple-coloured flushings of the face are sometimes an attendant. The tongue is usually of a brownish yellow colour, furred, and has intensely purple red edges. Constipation is a very common symptom, accompanied with flatus and eructation, and diarrhoea is uncommon, excepting the disease is about to undergo a salutary change. The urine is pale, thin and cloudless, unless it be morbidly retained, which some do for several days. The thirst is usually great, and a peculiar odour is perceptible from their bodies.

* Rush, p. 216. Dr. Reid (Essays on nervous affections,) in his usual figurative language says, "Paroxysms of mania are convulsions of the mind; those of melancholia its paralysis."

† Hill, p. 101.

‡ Some lunatics complain of a burning or stinging in the skin, when on examination it appears healthy. (Knight, p. 116.)

Watchfulness is also common in this form of disease, and sleep when it is present, is often broken by nocturnal visions or frightful dreams.

On objects not relating to the subject or passion which characterizes the delusion, they sometimes reason and act rightly, and often with great force and subtilty. But this is far from being invariable. The mind cannot be deemed sound, even when exercised on points disconnected from the particular hallucination, and it is very common that this absorbs the whole attention.

In these instances, even when apparently sane, if the morbid impression be once referred to or excited, all is merged in it. And it is equally astonishing and melancholy, how vivid this remains, through the long lapse of years. A young clergyman, two days previous to the appointed period of his marriage, was employed in snipe-shooting with a friend. Accidentally he received part of the charge of a gun in his forehead. He instantly fell, and did not recover for some days, so as to be deemed out of danger; but at the end of this period it was perceived that he was deranged. The interesting event that was to have taken place, became the leading object of thought, and all his ideas seemed to stop at this. "All his conversation was literally confined to the business of the wedding; out of this circle he never deviated, but dwelt upon every thing relating to it with minuteness; never retreating or advancing one step farther for half a century, being ideally still a young, active, expecting and happy bridegroom, chiding the tardiness of time, although it brought him at the age of eighty gently to the grave."*

There are very few melancholics whose delirium is not exasperated every two days; many have a strongly marked remission in the evening and after meals; others are exasperated at the beginning of the day or at evening.† Haslam also observes, that the symptoms are aggravated by being placed in a recumbent posture. And patients, when in the raving state, seem, of themselves, to avoid the horizontal position as much as possible, and when so confined that they cannot be erect, will keep themselves seated upon the breech. This remark applies equally to mania and monomania.

I may also in this place add a general remark with respect to the age most liable to insanity. This is often useful in the for-

* Hill, p. 421,

† Parkman, Haslam on Madness, p. 80.

mation of opinion. Infancy seems to be nearly exempted from its attacks, unless there be some congenital malconformation, or unless idiotism be induced by convulsions, epilepsy, or some other previous and severe disease. The disease, however, often occurs to very young persons, and it is about the age of puberty, that its causes begin to operate most powerfully on youth. It is at this period characterized by its rapid progress and height of excitement; in adult age it is more chronic.*

The state of mind in this and the previous form of insanity is strikingly peculiar. I have met somewhere, but am not able to refer to the author, with a proposed division of the disease into abstraction and vivid imagination, and they would certainly seem to embrace the most striking mental features. The last creates new ideas and mistakes recollections for real existences. "The power of reasoning or judgment," (says Dr. Prichard,) "does not appear to be so much impaired in madness, as the disposition to exercise it on certain subjects. Often there is a manifest unwillingness to admit any evidence unfavourable to the false notions impressed upon the mind. In many instances, it would appear that the characteristic feature of the disease, is a morbid inclination to indulge in revery, and to yield the judgment and all the faculties to its control. The impressions of revery are so modified by disease as no longer to be distinguishable from those of memory or active reflection."

Some monomaniacs indeed reason accurately but their premises or facts are baseless, as when a wealthy man imagines himself in danger of dying in a workhouse, and lives and acts as a miser. Others again, act on accurate premises, but take too "rapid a view" of them, as in the case of the clergyman quoted by Dr. Abercrombie, who *burnt* his library, because it consisted altogether of controversial divinity.†

* Medico-Chirurgical Review, vol. 1, p. 251.

† I am unwilling to multiply the divisions of insanity, but there is one variety, particularly noticed by Dr. Prichard, which may be deemed the intermediate one between mania and dementia, as described in the text, and therefore deserves a brief notice. He styles it *incoherent madness*, and its most striking characteristic, according to our author, is the rapidity and disorder with which the ideas follow each other, almost without any discoverable connexion or association, in a state of complete incoherence and confusion. The understanding of the patient is wholly lost in the constant hurry of ideas that crowd upon him, while his habits show equally restless activity and extravagance.

In many cases no hallucination or erroneous impression on the mind can be traced. The thoughts seem to be single and insulated, and words and sentences are half pronounced. It is impossible to fix the attention of the patient, and he is almost

Dementia. This is often the consequence of mania or melancholy, and is somewhat allied to that decrepitude of mind, which frequently appears in old age. It may also originate from external injury or internal disease.

The understanding and memory are either totally, or to a very great extent, impaired in this form of disease; yet on a few points the latter seems sometimes to be in a perfect state. "Habit, however, has a great influence on their conduct, and gives it an appearance of regularity, which should not be mistaken for reasoning."* They hate, love, or fear particular individuals uniformly, and kindness or attention will seldom, if ever, give them confidence in those they dislike.

Patients of this description are usually calm and quiet, though occasionally short periods of fury supervene. They sleep much, enjoy a good appetite, and are apt, if neglected, to become slovenly and dirty in their appearance. Esquirol mentions a case, which will give a general idea of this class in its usual form. The patient was a female, aged seventy, who, after having passed several years in a state of furious mania, at last fell into dementia. "The hallucination of this individual corresponds with her advanced age, and the long duration of the complaint. She preserves a few ideas, which still savour of pride. She believes herself the daughter of Louis XVI. but otherwise there is no coherence; no memory of recent transactions; no hopes or fears, desires or aversions. She is calm, peaceable; sleeps well, eats with voracity, and appears perfectly happy."†

The ideas, although few and isolated, sometimes pass in rapid or alternate succession; and this gives rise to incessant babbling, unwearied declamation, and continual activity, without object or design. Occasionally they assume a menacing air, without any real anger, and this is soon succeeded by immoderate laughter.‡

The appearance is generally peculiar; the countenance is pale, the eyes are dull and moist, the pupils dilated, and the look is motionless and without expression. There is a variety as to

insensible to external objects. In favourable cases this incoherency gradually subsides and the patient is in a promising state for recovery, if he becomes capable of sleeping. The resemblance of this to some of the symptoms of mania, will occur to the reader, but it is evident that it occasionally constitutes an idiopathic species of insanity. It may end, like mania or monomania, in dementia.

* Parkman.

† Medico-Chirurgical Review, vol. 1, p. 270.

‡ Fodéré, *Traité du Délire*, vol. 1, p. 413.

emaciation or fatness; some are extremely thin, while others are corpulent.*

Idiotism. Individuals labouring under congenital idiotism, are marked by some striking characters. At its commencement it is indicated both by feebleness of body and feebleness of mind. In some countries this melancholy disease is not uncommon, and it has been particularly remarked in the Valais in Switzerland, and in Carinthia. In the former country, the subjects of it are styled *Cretins*. But wherever found, whether in individual instances, or originating in some national cause, the appearance may generally be described as follows:

The skull is usually smaller and inferior in height to the skull of maniacs, and there is a great disproportion between the face and head, the former being much larger than the latter. The countenance is vacant and destitute of meaning, the complexion sickly, the stature usually diminutive, the lips and eyelids coarse and prominent, the skin wrinkled and pendulous, and the muscles loose and flabby. To these, are usually added a complication of other diseases. The subjects are rickety, scrofulous or epileptic; the eyes are squinting or convulsive, and the hearing is imperfect or totally destroyed. Dr. Reeve visited the Valais, and saw several of these unhappy beings. One lad twelve years old, could speak a few words, but was silly, and of a weak and feeble habit. Another boy, nine years old, was deaf, dumb and idiotic. Neither of these, however, had goitres. A third, a girl, twelve years old, was deaf, dumb, and cross-eyed, and had a monstrous goitre; while a fourth had an enlarged abdomen, and some feeble traces of understanding.†

While some are dumb, others express themselves in inarticulate sounds, cries, or a prolonged roar. A few are able to utter

* It is proper to state that many other subdivisions have been made of that condition of mind which is characterized by weakness, and of which idiopathic dementia and idiotism are the most striking examples. Thus, Hoffbauer, a legal writer of celebrity in his own country (Germany,) makes two modifications of this state, *imbecility* and *stupidity*; the one defective in the powers of reason and discrimination, the other obtuse in perception and apprehension. He again subdivides imbecility into five degrees, the last being identical, as far as I can judge, with idiocy; and stupidity into three degrees. It is doubtful whether the practical benefit to be derived from this minuteness, will ever compensate for the endless discussions that might arise on its introduction into our laws, and this is the object of Hoffbauer. I refer to his work, and to Dr. Prichard, *Art. Soundness and Unsoundness of Mind*, in the *Cyclopedia of Practical Medicine*, vol. 4, p. 39.

† Edinburgh Medical and Surgical Journal, vol. 5, p. 32. See, also, Edinburgh Review, vol. 2, p. 170. American edition.

a word or two distinctly, as with the idiot mentioned by Esquirol. This was a female, aged twenty-one years, who had been in the Salpetriere three years without any change. Her head was large and irregularly shaped, and the forehead high and prominent, so that the facial angle was more than ninety degrees. She eat voraciously, and without discrimination; passed all evacuations involuntarily, but the menses were regular and abundant. She walked little, and all her movements were convulsive. She was a perfectly helpless infant—insensible to heat, cold, rain, or even her own internal feelings. She could only utter the words "*papa* and *mamma*" which she frequently repeated.*

Dr. Rush relates the case of a boy born near Philadelphia, which is no less striking. He was twenty years old when that distinguished physician published his work, and was then unable to walk or speak. He had then the head of a man, but all the parts below it resembled those of a child two or three years old. His pulse was from ninety to one hundred and twenty in a minute. He had shed his teeth, and now exhibited a third set in three distinct rows in his upper jaw; and yet with all this, he was unable to chew his food, and all that he took of a solid nature was first chewed for him by his sister. His ears were very large. When hungry or in pain, he cried, but more commonly laughed for hours, and even for whole nights together, and so loud as to disturb the sleep of his family. He discovers mind, says Dr Rush, in but three things, viz. in an affection for his mother and sister, and in love for a dog, and for money. Distress is manifest when the dog is out of his place; and the pleasure which money gives him, is owing to the association he has been enabled to form between it and the means of procuring gingerbread, of which he is fond.†

I must not, however, be understood as stating that all who belong to the class of idiots are distinguished by equally striking marks. There is a variety in this, as in other diseases. Some approach to the description of dementia, or what is commonly

* *Medico-Chirurgical Review*, vol. 1, p. 250.

† Rush, p. 292. I will only refer to another case, and it is that mentioned by Mr. Hobhouse, which was seen by him at the Hospital in Smyrna, in 1810. The individual was a female, about three feet and a half in height. She constantly sat, rolled up, as it were, upon a truss of straw; was quite dumb, nearly deaf, and possessed of no one consciousness of humanity. She would hop towards her keeper, on being loudly called by a name with which she was familiar. Her profile is given by Mr. Hobhouse, and it is strikingly characteristic of idiotism. (*Travels in Albania*, vol. 2, p. 626, London edition.)

called *imbecility*; others appear capable of cultivating the memory and attention. Though in general harmless and timid, yet there are occasionally exceptions.*

There remains to be considered another and disputed form of mental disease, which, in conformity to the nomenclature of many experienced observers, I have denominated MORAL INSANITY.

It has professedly been adopted, because physicians have not been able to detect any delusion or hallucination in the persons affected. The intellectual faculties appear to have sustained but little injury, but the feelings and affections are perverted and depraved, and the power of self-government is lost or greatly impaired.† Thus, Spurzheim defines insanity to be either a morbid condition of any intellectual faculty, without the person being aware of this; or *the existence of some of the natural propensities in such violence, that it is impossible not to yield to them.* Dr. Elliotson, while approving of this, suggests that there should be included in the definition, the idea of such irresistible violence as *leads to criminal acts.*‡ Pinel was so struck with the peculiarity of this form, that he introduced it as a distinct species in his work, under the title of “*madness without delirium or hallucination.*”

Esquirol, indeed, goes so far as to assert, that this is the proper characteristic of mental derangement. “There are madmen, (he observes,) in whom it is difficult to discover any trace of hallucination; but there are none in whom the passions, and moral affections are not disordered, perverted or destroyed. I have, in this particular, met with no exception.”

Concurring in these opinions from actual observation, Dr. Prichard, in a late essay on this subject, has proposed the following definition.

“*Moral insanity or madness* consists in a morbid perversion of the natural feelings, affections, inclinations, temper, habits and moral dispositions, without any notable lesion of the intellect, or knowing and reasoning faculties, and particularly without any maniacal hallucination.”§

According to our author, individuals of this description are

* As in the instance of the idiot in Cornwall, who strangled and afterwards burnt the body of an old woman who had for some years superintended his person. (Paris and Fonblanque, vol. 1, p. 311.)

† Prichard, art. *Insanity*, in *Cyclopædia of Practical Medicine*.

‡ London Medical Gazette, vol. 8, p. 168.

§ Prichard *ut antea*.

often, before the idea of their insanity occurs, reputed to be of singular, wayward and eccentric character.* They commit many equivocal actions, their temper and disposition are found to have undergone a change, probably in consequence of some misfortune or loss—or from some shock to the constitution. The alteration is gradual, but sufficient to excite the apprehension and solicitude of friends; and though these may be unwilling to recognise the actual disease, yet they must notice caprice and fickleness in pursuits, united with a total perversion of affections. Enmity against their dearest friends, is a frequent trait in such individuals.

“Persons labouring under this disorder, are capable of reasoning or supporting an argument on any subject within their sphere of knowledge, that may be presented to them; and they often display great ingenuity in giving reasons for their eccentric conduct, and in accounting for and justifying the state of moral feeling under which they appear to exist.” They think and act, however, under the influence of strongly excited feelings.

It is under this division of insanity, that the commission of acts of violence very frequently occurs. The French writers insist much on a faulty education as a principal cause, and there is no doubt, that they have given in this the key to most of the histories with which legal and medical works are lately filled. The temper is scarcely attempted to be restrained, nay its very transports are encouraged and justified, and it is hence not surprising, that as age advances, liberty of action should be converted into licentiousness. France has tried the experiment. Other countries are rapidly feeling its early results.

Pinel relates the case of a self-willed, violent boy, encouraged by his mother in every caprice and passion. The slightest opposition produced actual violence. Any animal that offended him, was put to death. As he grew up, he was constantly engaged in broils, and ended his career by murdering a person who used offensive language to him. On his trial, this course of conduct was adduced as proof of his insanity, and he was condemned to perpetual confinement in the Bicetre.

The results of this species are various. In many, it displays

* “The errors of the eccentric (says Dr. Gooch) are the results of long habits continued for a great part of their lives, and fabricated by slow and almost insensible degrees; while the errors of the insane spring up suddenly within a few months or even weeks.” (*Quarterly Review*, vol. 41, p. 173.)

itself in an irresistible propensity to commit murder, (homicidal mania;) in others, to commit theft, while some are impelled to set fire to buildings, often of the most venerable description. We are told, that when this state is connected with the false belief of some personal injury actually sustained, "it does not come under the head of moral insanity." Here is an hallucination. "But if the morbid phenomena include merely the expressions of intense malevolence, excited without ground and provocation, actual or supposed, the case is strictly one of moral insanity."

Though there are many, as above described, who have this propensity to commit each and every kind of mischief, yet there are some where the disease commences and ends in intense irascibility.* A large proportion are subject to melancholy and dejection of mind, unaccompanied, however, by any illusion. It would appear to be confined to no age—and indeed is said occasionally to make its appearance in those advanced in years. Their whole moral character is changed—"the pious," says Dr. Burrows, "become impious; the liberal, penurious; the sober, drunken."

In this description, which, as already stated, is taken from the writings of the most esteemed modern authors on insanity, I need hardly suggest to the reader the striking resemblance that it bears to crime. Owing to this, our legal tribunals can hardly be considered as giving an assent to its actual existence. The difference of opinion which exists, with examples of cases that have been discussed, will, however, be more properly considered in the section on the *legal definition* of a state of mental alienation.†

Besides the forms of insanity now described, there are others mentioned by systematic writers; as *demonomania*, which is a variety of melancholy, originating from mistaken ideas on religious subjects; and *nymphomania*, or *furor uterinus*, a raving mania of females, connected with a disorder of the generative organs. Other mitigated affections will be noticed hereafter.

A short enumeration of the causes of insanity may be introduced in this place. They are usually divided into physical and

* "Some complain—lie—quarrel. You cannot find a single idea truly foolish; the delirium is in their actions and moral sentiments. The judgment only becomes perverted, when the disease is at its height." (Leuret, *Annales D'Hygiène*, v. 1, p. 284.)

† It is proper to add, that all the medical observers above quoted, concede that the other forms may be, and often are, superadded after a time, to the state of moral insanity.

moral, or bodily and mental; but a separation of this nature is not conducive to just views of the disease. Insanity is essentially a bodily disease, and the moral causes operate in producing it, as they do in producing other complaints.

We may enumerate the following as remote causes: repeated intoxication, abstinence, injuries to the head, fever, suppressed discharges and secretions, excessive evacuations, mercury largely and injudiciously administered, paralytic affections, influence of particular seasons, hereditary predisposition, sedentary habits, excess in pleasure, factitious passions, mistaken views of religion, parturition, errors in education, intense application to a particular study or object of investigation, misfortunes, the excitement of political changes, and particularly a state of war.

On age, a remark has already been made; and it may be added as to sex, that upon a comprehensive comparison, there is found to be no other disproportion among the insane, than among the sane population in general.*

It should be remembered, that the insanity of females is always aggravated at the period of menstruation, particularly when it is in a morbid state.†

II. *Of feigned and concealed insanity.*

The medical witness is often required to decide on the actual existence of insanity, and it therefore behooves him to be well acquainted with its actual symptoms. It is in this point of view, that the enumeration given in the previous section becomes valuable. It will also materially aid in detecting feigned or concealed insanity.

There is no disease, says Zacchias, more easily feigned, or more difficult of detection, than the one under consideration. And hence, he remarks, many great men of ancient times, in order to elude the danger that impended over them, have pretended it; as Ulysses, Solon, and Brutus, the expeller of the Tarquins.

In our day, however, madness is most commonly feigned for the purpose of escaping the punishment due to crime, and the responsibility of the medical examiner is consequently great. It is his duty, and should be his privilege, to spend several days in

* Haslam on Madness, p. 208, 210. Medico-Chirurgical Review, vol. 1, p. 251.

† Marc, in Godman's Western Reporter, vol. 2, p. 68. Esquirol.

the examination of a lunatic, before he pronounces a decided opinion. If this be allowed to him, and also if he be enabled to obtain a complete history of the antecedent circumstances, much may be effected towards forming a correct opinion. The following remarks may serve as points on which the inquiry is to be grounded, and the comparison instituted.

1. Insanity is seldom sudden in its attacks. The aberrations from reason are at first slight and almost imperceptible, but gradually acquire more marked characteristics. With the feigned, on the other hand, they are sudden, abrupt and violent.

2. It requires powers beyond the scope of ordinary exertion to counterfeit the character of an active paroxysm to its full extent. The deception is not maintained when the pretenders are alone and unwatched—the assumed malady then disappears, and the imposture is recommenced when they are in the society of others.*

3. A certain cast of countenance, and gestures accompanying it, are so peculiar in the insane, that a medical examiner familiarized to them, will generally be able to designate the state that is present. Pretenders often outstrip madness itself, and seem desirous to exhibit themselves in its most violent and disgusting forms. They overdo their part. "They seek to exhibit the total abolition of the rational faculty, instead of its partial perversion."

4. Real lunatics, at the period of remission, are desirous of being deemed free from the malady, and often assiduously endeavour to conceal from observation those lapses of thought, memory and expression, which are tending to betray them. Alexander Cruden, when suffering under his last attack of mental aberration, upon being asked whether he ever was mad, replied, "I am as mad now as I was formerly, and as mad then as I am now, that is to say, *not mad at any time.*"† The feigned never desire to conceal their condition.

5. Pretenders are unable to prevent sleep. That watchfulness which is so constant an attendant on the insane, is scarcely to be

* Haslam's Medical Jurisprudence of Insanity. p. 322.

† Hill, p. 392. It may be new to some of my readers that this was the author of the "Concordance of the Bible," and that he became insane in consequence of the death of Queen Charlotte, to whom he had dedicated it, and on which he had founded high hopes. See an account of him in the Library of Entertaining Knowledge, vol. 3, p. 186.

preserved for any length of time by those who are in actual health. "In the case of a seaman, who enacted under our own eye the part of a furious maniac, in hopes of escaping punishment, sound sleep overpowered him on the second night of the attempt."*

6. The physician should endeavour to obtain from the individual a history of himself. This requires attention and time, but the prosecution of the inquiry may lead to the developement of some probable motives for his present conduct.† Unless highly irritated, or suspicious of his medical attendant, some opportunity will occur in which the real state of mind will be shown. If there be delusive ideas prevailing, a glimpse of them may be caught, and by prudent management, the lunatic thus often makes him a confidant. Not only should the physician frequently converse with the patient, but also endeavour to have him write. In many instances the style, or the manner of penmanship will detect.‡

7. Mr. Hill also recommends attention to the presence or absence of the peculiar animal odour that is observed in maniacs. And "the best mode of making the discovery of it, is to enter the bed-room of the subject on his first awaking, after having slept in a small, ill-ventilated room, in sheets and body linen occupied by him for some time, the curtains now to be opened by the inspector. On inhaling the effluvia under these circumstances, it is scarcely possible to be mistaken."§

8. Dr. Rush proposes a rule, grounded on the following circumstance: the pulse, according to his observation, is more frequent in all the grades of madness than in health. I have already intimated doubts on this point, and therefore can only recommend it as a test worthy of notice, but not of great value. He mentions the following case in which it was applied, and which deserves quotation. Two men were condemned to die in 1794, for treason, committed against the general government in the western counties of Pennsylvania. One of these was said to have be-

* *Cyclopædia of Practical Medicine, art. Feigned Diseases*, vol. 2, p. 146. When soldiers or sailors are suspected of feigning, they should be confined alone, and so that they can be overlooked when not suspecting it. (Marshall, p. 144.)

† Hill, p. 396.

‡ Conolly, p. 467.

§ Dr. Knight recognizes the correctness of this, and says Boerhaave and Van Swieten have each noticed it, p. 121. Esquirol also mentions it. Burrows says, (p. 297) "If I detected it in any person, I should not hesitate to pronounce him insane, even though I had no other proof of it."

come insane after sentence of death was pronounced on him. A physician was consulted upon his case, who declared the madness to be feigned. General Washington, the president of the United States, directed a consultation of physicians, and Drs. Shippen, Rush and Samuel P. Griffiths were appointed for that purpose. The man spoke coherently upon several subjects, and for a while, the state of his mind appeared doubtful. Dr. Rush suggested the propriety of examining his pulse. It was more frequent by twenty strokes in a minute, than in the healthy state of the body and mind. Dr. Shippen ascribed this to fear, but when the pulse of his companion was examined, although equally exposed to capital punishment, it was found perfectly natural, both in frequency and in force. This discovery induced the physicians to unite in a certificate, that the individual was really mad. He was respited, and subsequently pardoned.*

9. The administration of a strong solution of tartar emetic, unknown to the suspected person, has been advised. Where a common dose takes a full and powerful effect, deception may be suspected, as it is stated that this never follows its administration in any stage of approaching or actual insanity, and more especially in the maniacal form, which is commonly attempted to be personated.†

10. It is very difficult uniformly to assume that extreme and sudden irritation, which, in real maniacs, instantly arises from any contradiction of their opinion or wishes.‡

11. Dr. Willis has suggested the following as proofs of recovery: "If a patient, after being perpetually restless, can sit quiet in his chair for half an hour, we may judge favourably of him, though his delusions be as strong as before. When he remains composed for whole days together, we may look for a return of reason."

He further adds, that in his opinion, no one can be considered cured, or in other words, of sane mind, "*until he freely and voluntarily confesses his delusions.*" I confess that I doubt this, and at all events agree with the critic, who observes that it can only apply to monomania, as in the other species the insane may be

* Rush's Introductory Lectures. Lecture xvi., p. 369.

† Hill, p. 306. "Some melancholics, as well as maniacs, are very insensible to the action of drastic purgatives." (Marc, Godman's Western Reporter, vol. 2, p. 67.) See also Male, p. 257.

‡ Foderé, *Traité du Délire*, vol. 2, p. 500.

perfectly ignorant of what he has been doing.* “I do not think it quite fair to expect this, (says Sir Henry Hallford.) Something must be conceded to the pride of human nature.”†

But it must also be remembered that the insane may conceal their delusions, and they frequently do this with great cunning. Hence it requires particular attention on this point, and it should also be ascertained whether they sleep habitually well.

12. The attempt to feign melancholy is more difficult, according to Dr. Haslam, than to pretend mania. “They are deficient in the presiding principle, the ruling delusion, the unfounded aversions and causeless attachments which characterise insanity; they are unable to mimic the solemn dignity of characteristic madness, nor recur to those associations which mark this disorder; and they will want the peculiarity of look which so strongly impresses an experienced observer.”‡

13. In cases of doubtful idiocy, the fact should be noticed whether they are pusillanimous and submissive. This is a precept of Zacchias; but it must also be remembered, that impetuous excesses sometimes occur in individuals of this description. Their memory and conception should also be put to the test.§

14. However skilful may be the attempt to counterfeit dementia, and it is the most easily assumed of all the forms, yet there is always in the pretender a kind of hesitation and reflection to be observed in his discourse. His wild ideas do not succeed each other with the same rapidity as those of a person whose understanding has been really destroyed. Marc proposes, as another test, to repeat to the insane person a series of ideas recently uttered. The pretended madman, instead of wandering incoherently, would judge it most expedient to repeat the same words for the purpose of proving his madness.||

15. There are many instances, where, without any precise intention of concealment, the existence or non-existence of insanity requires to be ascertained. This is particularly the case as to the disposition of property; and hence the sanity of a testator is so

* *Medico-Chirurgical Review*, vol. 6, p. 371.

† *Halford Essays*, p. 141. Probably, as a general rule, the insane do not recollect occurrences passing during their illness. The whole is as a dream to them. There are, however, numerous exceptions to this. Esquirol as well as other observers, have witnessed instances, in which convalescents were able to recollect every thing that had happened. *Annales D'Hygiène*, vol. 16, p. 172.

‡ *Haslam's Medical Jurisprudence of Insanity*, p. 323.

§ *Marc*, *Godman's Western Reporter*, vol. 2, p. 66. || *Marc, ut antea*, p. 68.

often the subject of dispute in our courts of justice. If the physician has free access to the patient, all the directions already given should be followed, so far as they are applicable.

Sir Henry Halford, in a recent case, made a practical application of the test of Shakspeare, as given in the following speech of Hamlet :

Ecstasy !

My pulse as yours doth temperately keep time,
And makes as healthful music. It is not madness
That I have uttered ; bring me to the test,
And *I the matter will reword, which madness would gambol from.*

A gentleman sent for a solicitor, and gave him instructions for his will ; and among other things, told the solicitor that he would make him his heir. He soon after became deranged, and was attended by Sir Henry Halford and Sir George Tuthill. After a month's violence, he was composed and comfortable, but extremely weak, and manifested great anxiety to make his will. This request was evaded as long as possible, but at last consented to. The solicitor received the same instructions, drew it, and it was signed by the physicians as witnesses. They inquired, at the time of executing it, whether such were his intentions ; and to each and every question, he answered affirmatively. On going down stairs, and conversing on the delicacy of their situation, it occurred to Sir Henry Halford to apply the above test. They returned to his room, and asked him as to the disposition of his property. With respect to the legacies, he answered correctly ; but when inquired of, to whom his real estate was to go, he answered " to the heir at law, to be sure."*

16. It may sometimes be proper, if suspicion exist, to speak of some severe remedy, or to threaten some punishment. The really insane do not heed these, being occupied with the phantasms of the imagination, and they are hence insensible to the operation of hope or fear ; the feigned, on the other hand, will often discover, by words or actions, the emotion which the threat produces. Zacchias relates, that in his day, an able physician ordered, in the hearing of a suspected person, that he should be severely whipped. This was directed on the following grounds : If the patient be really insane, the whipping will produce an irri-

* Halford's Essays, p. 47.

tation on the external parts, and may tend to alleviate or remove the disease; if not, he cannot stand so severe a test. The event proved the success of this mode of reasoning, as the threat alone sufficed to cure the pretended malady.*

On the same principle, the following case was detected by Foderé. A female, named Susannah Cloitre, was, in 1789, imprisoned, on the charge of having, in company with others, committed several highway robberies. Before this time, she had repeatedly, through her ingenuity in feigning insanity, escaped punishment from several tribunals in Savoy and Geneva. Foderé was ordered to examine her; and on his first visit, she counterfeited the maniacal fit in so able a manner, as almost to lead him to certify that she was insane. Recollecting, however, at the moment of departure, the case related by Zacchias, he returned to the door of the prison, and said in a firm tone of voice, the following words: "To-morrow I shall again visit her, and if she continue to howl, if she be not dressed, and her chamber not put in order, you must apply a red-hot iron between her shoulders." The next day the chamber was found washed, the prisoners had slept quietly during the night, and the patient was dressed. Foderé continued his visits for some days, when he certified that she was not affected in her mind.†

17. Marc advises us to notice whether the returns of the disease are regular or irregular. Dementia is rarely periodical in its excitements; melancholy is more commonly so; mania with delirium, almost constantly; and mania without delirium, always. The approach of storms always excites maniacs, and females are most violent as menstruation is approaching.‡

* *Threaten*, but do not apply any *extra-professional* infliction. Speak of sending to an insane hospital—of confining them to a diet of bread and water, &c. and let them be secluded from their companions. These directions are particularly applicable to feigned insanity among soldiers and sailors. Occasionally the physician, in spite of every precaution, proves to have been mistaken, and he *may* cause the innocent much suffering. (*Cyclopædia of Practical Medicine*, vol. 2, p. 147.)

† Foderé, *Médecine Légale*, vol. 2, p. 461.

‡ *Dictionnaire des Sciences Médicales*, Art. *Aliéné*.

"The best mode that has yet been discovered, for forcing a man who feigns madness, to confess and desist, is by the use of the whirling chair; that is, a chair placed upon a spindle, which revolves upon its own axis, and is turned by a wheel and crank, with the rapidity of the fly of a jack. It produces nausea, even to syncope; and after two minutes of such discipline, few men can command spirits sufficient to act any part. It was by this means that M'Dougal of Glasgow was rendered sane, when he feigned madness to avoid being tried for sinking ships to defraud the underwriters; but he betrayed himself to the medical men by the common fault of impos-

In elucidation of the subject of doubtful insanity, Marc relates three cases, which I shall briefly analyze.

A man named Doux, was committed to prison for attempting the murder of his wife. Drs. Marc and Rostan were desired to visit him. His companions in confinement stated that they had not witnessed any thing inconsistent with sanity, and that he testified regret for his conduct. Doux's own account was, that his wife had proved faithless, and that he was constantly witnessing her attachment to her paramour; a violent quarrel finally ensued, when he beat her, and left her apparently dead.

These facts appearing probable, and presenting nothing like insanity, they repeated their examination three days after. He made a similar statement, and on being asked as to his health, said he was well. On examining witnesses, however, the wife and neighbours knew nothing of the paramour, nor of other circumstances of which he had spoken. In this state of facts, Marc put the following questions: *Are the statements false?* Then his memory must be extraordinary, to repeat these circumstances so frequently, without any alteration. *Has he lied to feign insanity?* Why then does he say that he is well? *Are these stories the effect of an illusion?* Yes. He was melancholic; had violent quarrels with his wife; became very intemperate during the last year; fell at one time from his horse on his head, and has had constant pain there since. The physicians hence gave it as their opinion that this was a case of monomania, in which the predominant idea was jealousy.

Two months after, he was again visited, and found much altered. The conjunctiva was injected, the tongue red, the pulse slow, and his answers to questions slow and incoherent. He knew nothing of the paramour, on whose conduct he had previously dilated so much; and on being desired to shake hands firmly, he was unable to exercise the least constriction. It was also ascertained that he frequently had involuntary discharges of urine. The case was thus evidently verging to dementia, combined with palsy.

Another instance is derived from the narrative of Professor Monteggia.

tors, not having "a method in his madness," but mixing up the two irreconcilable characters of

" 'The moping idiot and the madman gay.' "

DUNLOP.

In 1792, a criminal confined in the prison of Saint Ange, no sooner heard that his accomplices had denounced him, than he appeared to be in a state of dementia. The physicians who examined him, were inclined to doubt its reality, from the suddenness of the attack—from its sometimes seeming to be melancholy, then exhilarated insanity, and then complete dementia. He made no answer to questions, except by single words, as *book*, *priest*, *crown*, *crucifix*, and if he made an attempt, as it would sometimes appear, it ended in the repetition of some of these words.

In his presence, the physicians stated, that there were several peculiarities in the case, and among these, that he made noise during the night, and was quiet in the day time—that he never sighed, and that he never fixed his eyes on any object. The drift of their conversation was, that the opposite of all these would induce them to suppose him insane. Shortly after, in fact, he ceased making noise at night, and did every thing that they had indicated. A blister applied to his neck had no effect, except to change a state of complete muteness which had been present for some time, to the former babbling of disconnected words.

All these things strengthened the idea of feigning. In July, 1793, he was transferred to the prison at Milan, and Monteggia was ordered to visit him. He still appeared demented. He could not look at a person steadily—never spoke—but made a hissing noise at the sight of any thing that pleased or displeased him. He was fond of shining bodies, and made a collection of them. He was constantly in motion, and it was the opinion of his attendants, that he scarcely ever slept. His appetite was good, though sometimes irregular.

The impression hence became strong with Monteggia, that he was insane; but recollecting his conduct at Saint Ange, the idea suggested itself, of giving him a strong dose of opium, in order to ascertain its effects. Six grains were mixed in his soup, but without any effect. Some days after, this dose was repeated; but seeing, in the course of six hours, no proofs of its operation, it was again repeated. Notwithstanding this, he passed the night, and the next day, awake. The next night he seemed disturbed, and about one in the morning, he raised himself in bed, sighed profoundly, and exclaimed, *My God, I am dying*. His attendant, who had never heard his voice before, was extremely frightened, and sent immediately for Monteggia.

The patient was tranquil, and speaking sensibly, without any appearance of insanity. He said that he had no recollection of the past; but that he had heard persons say, that poisoned soup had been given to him. He complained also of the state of his stomach. An emetic was given, which acted freely. From this time, he appeared cured. He remained a month, and then was conducted to his criminal associates in prison.

Monteggia asks, whether this man was insane? If so, was he cured by the opium? Or did its effects produce such a state that he imagined he was going to die? Why then did not the first dose produce some effect? Is it not probable, (he adds,) that from long feigning, a state of actual dementia may have at last been present at the first exhibition?

A female, of the name of Buy, was assassinated by Jean Gerard, a bold villain, at Lyons, in 1829. He was arrested, but immediately afterwards seemed to be struck with dementia, accompanied with inability to speak. Drs. Biessy, Faivre and Brachet, were directed to visit him. They understood that he ate well, but never spoke, and remained on his bed constantly, without scarcely ever moving. When food was administered to him, he was placed in a proper position, and he remained in that, without appearing to hear or attempting to speak.

Reflecting on this, it was agreed that they would not show themselves to him, lest his suspicions might be excited; but as this was a case nearly approaching to idiotism, with apparent paralysis of the nerves of the ear and tongue, the actual cautery to the soles of the feet would be a proper application. It was accordingly applied for several days, with active purgatives, without any effect. It was next agreed that the cautery should be used on the neck, as nearer to the seat of disease. Two days passed without any result. On the third, however, while making the necessary preparations for another trial of the remedy, Gerard signified by signs his objections to it. When urged to explain, he spoke—"They accuse me of a crime of which I am innocent. They call me a fool," &c.

The disease was thus removed, and the physicians reported that it had been feigned.*

Whether the investigation should be confided to medical men,

* *Annales D'Hygiène*, vol. 2, p. 353 to 392. Additional Reports of cases of doubtful insanity, examined by Marc and others, are given in vol. 4, p. 383 to 404.

or whether individuals generally are competent to it, is a question raised by some writers which I shall not discuss. In disputed cases, both of feigned and concealed insanity, it is very common for persons in every class in society, to come forward with their testimony, stating that the individual is or is not insane, while their depositions are often founded on transient conversations—on short and inattentive examinations, or on a slight notice of counterfeited or ordinary actions. That these are not calculated to determine the true state of mind, has, I hope, been already shown. That they may lead to serious errors, will particularly appear, when we hereafter notice that form of insanity, in which the boundaries between it and sanity approach so near, that judges and juries often doubt whether the act is the result of madness, or of wickedness.*

This disease is observed to be *concealed*, in the hope of escaping the restraints of confinement. And the difficulty of detection is increased by the remarkable cunning and dissimulation, of which some maniacs are capable. A few examples will illustrate this in a satisfactory manner.

“An Essex farmer, about the middle age,” says Haslam, “had on one occasion so completely masked his disorder, that I was induced to suppose him well, when he was quite otherwise. He had not been at home many hours, before his derangement was discernible by all those, who came to congratulate him on the recovery of his reason. His impetuosity and mischievous disposition daily increasing, he was sent to a private mad-house; there being, at that time, no vacancy in the hospital. Almost from the moment of his confinement he became tranquil, and orderly, but remonstrated on the injustice of his seclusion.

Having once deceived me, he wished much that my opinion should be taken respecting the state of his intellects, and assured his friends that he would submit to my determination. I had taken care to be well prepared for this interview, by obtaining an accurate account of the manner in which he had conducted

* In *Hathorn v. King*, (Massachusetts Reports, vol. 8, p. 371,) the question of the sanity of a testator was agitated, and the counsel for the appellants moved to inquire of the attending physicians, whether, *in their opinion*, at the time of executing the will, the deceased was of sound, disposing memory. It was objected, that the sanity of the party must be determined by his conversation and actions. These were the only standard, and the examination proposed would put the physicians in the place of the jury. But the court decided that the opinion of the physicians should be asked, and that they should state their reasons for the same.

himself. At this examination, he managed himself with admirable address. He spoke of the treatment he had received from the persons under whose care he was then placed, as most kind and fatherly; he also expressed himself as particularly fortunate in being under my care, and bestowed many handsome compliments on my skill in treating this disorder, and expatiated on my sagacity in perceiving the slightest tinges of insanity. When I wished him to explain certain parts of his conduct, and particularly some extravagant opinions, respecting certain persons and circumstances, he disclaimed all knowledge of such circumstances, and felt himself hurt, that my mind should have been poisoned so much to his prejudice. He displayed equal subtlety on three other occasions when I visited him; although by protracting the conversation, he let fall sufficient to satisfy my mind that he was a madman. In a short time he was removed to the hospital, where he expressed great satisfaction in being under my inspection. The private mad-house, which he had formerly so much commended, now became the subject of severe animadversion; he said that he had there been treated with extreme cruelty; that he had been nearly starved, and eaten up by vermin of various descriptions. On inquiring of some convalescent patients, I found (as I had suspected) that I was as much the subject of abuse, when absent, as any of his supposed enemies; although to my face his conduct was courteous and respectful. More than a month had elapsed since his admission into the hospital, before he pressed me for my opinion; probably confiding in his address, and hoping to deceive me. At length he appealed to my decision, and urged the correctness of his conduct during confinement as an argument for his liberation. But when I informed him of circumstances he supposed me unacquainted with, and assured him that he was a proper subject for the asylum which he then inhabited, he suddenly poured forth a torrent of abuse; talked in the most incoherent manner; insisted on the truth of what he had formerly denied; breathed vengeance against his family and friends, and became so outrageous that it was necessary to order him to be strictly confined. He continued in a state of unceasing fury for more than fifteen months.”*

Lord Erskine, in his celebrated speech for James Hadfield.

* Haslam on Madness, p. 53.

mentions two cases which are striking and instructive. "I examined," says he, "for the greater part of the day, in this very place, (the Court of King's Bench.) an unfortunate gentleman, who had indicted a most affectionate brother, together with the keeper of a mad-house at Hoxton, for having imprisoned him as a lunatic, whilst, according to his own evidence, he was in his perfect senses. I was, unfortunately, not instructed in what his lunacy consisted, although my instructions left me no doubt of the fact, but not having the clue, he completely foiled me in every attempt to expose his infirmity. You may believe, that I left no means unemployed, which long experience dictated, but without the smallest effect. The day was wasted, and the prosecutor, by the most affecting history of unmerited suffering, appeared to the judge and jury, and to a humane English audience, as the victim of a most wanton oppression; at last Dr. Sims came into court, who had been prevented by business from an earlier attendance. From him I soon learned that the very man, whom I had been above an hour examining, and with every possible effort, which counsel are in the habit of exerting, believed himself to be the *Lord and Saviour of mankind*, not merely *at the time of his confinement*, which was alone necessary for my defence, but *during the whole time, he had been triumphing over every attempt to surprise him, in the concealment of his disease*. I then affected to lament the indecency of my ignorant examination—when he expressed his forgiveness, and said with the utmost gravity and emphasis, in the face of the whole court, 'I AM THE CHRIST,' and so the cause ended."

The other statement he derived from Lord Mansfield himself, who had tried the cause. "A man of the name of Wood had indicted Dr. Monro, for keeping him as a prisoner, when he was sane. He underwent the most severe examination by the defendant's counsel, without exposing his complaint, but Dr. Battie having come upon the bench by me, and having desired me to ask him what was become of the Princess, with whom he had corresponded in cherry juice, he showed in a moment what he was. He answered that there was nothing at all in that, because, having been (as every body knew,) imprisoned in a high tower, and being debarred the use of ink, he had no other means of correspondence, but writing his letters in cherry juice, and throwing them into the river which surrounded the tower, where the

Princess received them in a boat. There existed, of course, no tower, no imprisonment, no writing in cherry-juice, no river, no boat, but the whole was the inveterate phantom of a morbid imagination. I immediately," continued Lord Mansfield, "directed Dr. Monro to be acquitted, but this man Wood, being a merchant in Philpot-lane, and having been carried through the city on his way to the mad-house, indicted Dr. Monro over again, for the trespass and imprisonment in London, knowing that he had lost his cause by speaking of the Princess at Westminster, and such," said Lord Mansfield, "is the extraordinary subtlety and cunning of madmen, that when he was cross-examined on the trial in London, as he had successively been before, in order to expose his madness, all the ingenuity of the bar, and all the authority of the court, could not make him say a single syllable upon that topic, which had put an end to the indictment before, although he had still the same indelible impression upon his mind, as he had signified to those who were near him: but conscious that the delusion had occasioned his defeat at Westminster, he obstinately persisted in holding it back."*

Some directions as to the best method of detecting concealed insanity, may readily be drawn from the above narratives, but the subject is in itself a very difficult one.† The medical witness in these cases, has to decide—not whether a person is actually or feignedly insane for the first time in his life, but whether there is such a recovery from madness as to entitle him to the appellation of a sane man.

* This evidence at Westminster was then proved against him by the short-hand writer. Lord Eldon, since he has been Lord Chancellor, has mentioned from the bench, a case which occurred to him while at the bar, also illustrative of the difficulty that occurs in such cases. After repeated conferences, and much conversation with a lunatic, he was persuaded of the soundness of his understanding, and prevailed on Lord Thurlow to supersede the commission. The lunatic, however, immediately afterwards, calling on his counsel to thank him for his exertions, convinced him in five minutes, that the worst thing that he could have done for his client, was to get rid of the commission. Vesey junior's Reports, vol. 11, p. 11. *Ex parte Holyland*.

† "Hoffbauer lays down the following short directions for discovering the particular hallucinations of insane persons:

"A general rule to be observed in these cases, is not to contradict the patient, nor to appear to consider his assertions as absurd or ridiculous. An air of interest acquires his confidence and induces him to conceal nothing. Sometimes, however, we may exhibit some astonishment, and even contradict him upon some unimportant points, so as to excite him to a more full explanation; but always in such a manner as indicates attention, and never incredulity."

Connected with the subject of mental alienation in a medico-legal point of view, is the uncontrollable inclination which some individuals have to drink vinous liquors, which always produce in them the most violent and dangerous excitement. The

The nurses, attendants and physicians, who have had the care of him, are the proper persons to testify concerning his state. Notwithstanding all the efforts, all the cunning and dissimulation which may be exercised, there are moments, when the ruling malady breaks forth, and it will most readily be noticed, by those who have previously watched him. And if his eye at these moments, “meets that which has so often checked his vacillatory emotions—the instant of such a meeting is the instant of self-correction, of silence, or of sudden order and surprising self-possession.”*

It must also be remembered, that those who are insane on particular subjects, will reason correctly on ordinary and trivial points, *provided they do not become associated with the prevailing notions which constitute their insanity.*† And this circumstance is very apt to become a source of error, since unobservant persons will be readily deceived by this temporary display of rational discourse, and form a hasty conclusion. Hence the importance of continued examination. At the commencement of an interview, it may be all calmness and apparent rationality—yet when least expected, the disorder breaks forth, and in many instances, there seems to be no cause for this conversion from apparent sanity to evident derangement. Even when placed in the society of other madmen, he is capable of detecting their folly and aberration from reason, and will endeavour to convince them of the absurdity of their prevailing opinions, “yet in a moment,

following cases, related by Esquirol, illustrate this observation, and prove the necessity of subjecting such individuals to seclusion.

“A girl who has been maniacal, and on this account was taken to Salpêtrière, is generally in such possession of her reason, that she acts as servant to the other insane. On the slightest contradiction, however, she takes to drinking, unless prevented by seclusion, drinks till she is intoxicated, becomes furious, and attempts suicide.”

“A lady has been several times taken to Charenton on account of her frequent intoxication, from the abuse of wine and spirituous liquors. When the paroxysm is over, she becomes ashamed, conceals herself, and loudly demands that she may return to her family. With the hope of giving her powerful motives for overcoming the inclination, the douche has been administered, her dismissal has been refused, and she has been threatened with seclusion for life. When she has again been brought back, she makes the fairest promises and the strongest resolutions; but nothing can prevent the return of the paroxysm.” DARWALL.

* Hill, p. 397. This circumstance may also be applied to the detection of feigned lunatics. “All such, upon seeing the person whom they know has been long accustomed to the management or cure of lunatics, become tenfold more foolish, boisterous or unmanageable than before, in order to impress the minds of the beholders with awful ideas of their very alarming or pitiable state, but their detection and exposure are the sure result of diligent inquiry.”

† Haslam's Medical Jurisprudence of Insanity, p. 295.

his mind launches into the regions of fiction, its admired clearness becomes obscured, and its seeming regularity exhibits a confused assemblage of violent distortion. There is no intermediate condition which separates these states, and the transition very much resembles the last connected glimpses of our waking thoughts, followed by the abrupt creation of a dream.”*

To conclude then on this point, the examiner must have sufficient time allowed him, and he should not be interrupted during it. The subtlety of the patient should be recollected, and his artful concealment of his real opinions. And these should not be directly commenced with, as subjects of discussion, since he would soon perceive the drift of the inquiries, and endeavour to evade, or pretend to disown them. “The purpose is more effectually answered by leading him to the origin of his distemper, and tracing down the consecutive series of actions and association of ideas. In going over the road where he has once stumbled, he will infallibly trip again.”†

III. *Of the legal definition of a state of mental alienation, and the adjudications under it.*

In this section, I propose to confine myself to such parts as it is important for a physician to be acquainted with, in his capacity as a witness. To go beyond, and to endeavour to give the whole law on this subject, would be like a lawyer instructing in anatomy.

The common law of England on the subject before us, is thus expounded by Blackstone. “An idiot or natural fool,” says he. “is one that hath no understanding from his nativity, and therefore is by law presumed as never likely to obtain any.” But a man is not an idiot, if he hath any glimmering of reason, so that he can tell his parents, his age, or the like common matters.* Over individuals of this description, the king is appointed guardian, and the lord chancellor acts under his authority, as the conservator of their property. He also is to provide for them, and at their death renders their estates to their heirs.

“A *lunatic*, or *non compos mentis*, is one who hath had understanding, but by disease, grief or other accident, hath lost the use of his reason. A lunatic is indeed properly one that hath

* Haslam's Medical Jurisprudence of Insanity, p. 296.

† Ib. p. 331

‡ Blackstone's Commentaries, vol. 1, p. 302, 304.

lucid intervals; sometimes enjoying his senses and sometimes not, and that frequently depending upon the change of the moon. But under the general name of *non compos mentis*, (which, Sir Edward Coke says, is the most legal name,) are comprised not only lunatics, but persons under frenzies, or who lose their intellects by disease; those that grow deaf, dumb and blind, not being born so; or such, in short, as are judged by the court of chancery incapable of conducting their own affairs."* Over such, the crown is also guardian, but in a different manner, as the law supposes that these accidental misfortunes may be removed, and therefore he or his special delegate, the lord chancellor, acts only as a trustee, and preserves the property for the use of the insane person, until he be restored to reason.

Of late years, however, a new term has been introduced in legal adjudications, and it is important to trace its origin, and if possible to fix its meaning. I refer to the phrase, *unsoundness of mind*.

Lord Chancellor Eldon was, I believe, the individual who first gave it a distinct place among the legal varieties of mental alienation, and the question of its existence has been a fruitful source of litigation. To appreciate the changes occasioned by its introduction, it will be sufficient to refer to the opinions of various chancellors of England. Lord Hardwicke held that unsoundness of mind imported, not weakness of understanding, but a total deprivation of sense. It was thus equivalent with the term insanity.† Lord Eldon, however, says, "Of late, the question has not been whether the party is insane, but the court has thought itself authorized to issue the commission *de lunatico inquirendo*, provided it is made out that the party is unable to act with any proper and provident management, liable to be robbed by any one; under *imbecility of mind*, not strictly insanity, but as to the mischief, calling for as much protection as actual insanity."‡ And this opinion, according to the commentary of Mr. Shelford, imports that the party is in *some such state of mind, as is contradistinguished from idiocy and from lunacy*, and yet such as makes him a proper subject of a commission. All the cases decide that mere imbecility will not do, and that incapacity to manage affairs will

* Blackstone, vol. 1, p. 304.

† He deemed it equivalent with the term *non compos mentis*, and said that by unsound mind must be understood a depravity of reason, or want of it, and not mere weakness of mind.

‡ 8 Vesey junior's Reports, p. 67. *Ridgway v. Darwin*.

not do, unless such imbecility and such incapacity amount to evidence that the *party is of unsound mind, and the jury find him to be so.**

In a subsequent case, the attempt of a jury to specify the conditions that in their opinion constituted the unsoundness of mind, was defeated. Their verdict was, "that the party was not a lunatic, but partly from paralysis and partly from old age, his memory was so much impaired as to render him incompetent to the management of his affairs, and consequently that he was of unsound mind, and had been so for two years.† Lord Lyndhurst quashed this inquisition, and ordered a second commission, which found the person to be of unsound mind.‡

As to what is the legal acceptance of this term, I will quote the sentiments of an eminent barrister, Mr. Amos, late professor of medical jurisprudence in the University of London. "This state of unsoundness of mind in the legal sense of the present day, is perhaps not very easy to define, for it is neither lunacy, idiocy, imbecility, or incompetency to manage a person's own affairs. And yet we have seen that an inquisition finding a person unfit to manage his own affairs, and therefore not sound of mind, has been found bad. The term unsoundness of mind, therefore, in the legal sense, seems to involve the idea of a morbid condition of intellect, or loss of reason, coupled with an incompetency of the person to manage his own affairs." And again, "*Soundness of mind* is a legal term, the definition of which has varied, and cannot, even in the present day, be stated with any thing like scientific precision."§

Mr. Shelford, the author of a recent very elaborate Treatise on the Law of Lunatics, makes the following observations: "It is to be lamented that the original meaning of the term "unsound mind" should have been departed from, and that so much uncertainty and latitude should have been given to it, as are implied by the words of Lord Eldon. For if unsound mind does not mean

* Shelford, p. 87.

† 4 Russel's Chancery Reports, p. 182. *In Re Holmes*.

The Rev. Mr. Holmes was seventy-seven years old. Two medical men (Drs. Pennington and Arnold) who had examined and conversed with him, considered him in a state of dementia, denoted by decay of the thinking faculty—mental imbecility and great want of memory, and they deemed him unfit for the management of his pecuniary affairs. It was on this testimony that the first verdict was rendered. *Medico-Chirurgical Review*, vol. 12, p. 244.

‡ A legal friend has suggested to me that probably Lord Lyndhurst's objection was to the argumentative nature of the verdict.

§ London Medical Gazette, v. 8, p. 419, 421.

a deprivation of reason, but a degree of weakness, and the Crown can issue commissions to try whether a party be of sufficient understanding to manage himself and his affairs, that is such a vague and uncertain ground for inquiry, as will open a door to invade the liberty of the subject and the rights of property.”*

Notwithstanding these objections by gentlemen of the bar, the term remains a part of the English law, and is already naturalized into our own jurisprudence. In the Revised Statutes of the state of New York, it is enacted, that the Chancellor shall have the care and custody of all idiots, lunatics, *persons of unsound mind*, and habitual drunkards.† Again it is ordained, that every person capable of holding land, except idiots, *persons of unsound mind*, and infants, may alienate it.‡ It is, therefore, of great importance that medical men and lawyers should agree on some definite meaning to be applied to it, and I know none better than that suggested in the following extract. It is deduced from the current of decisions.

After remarking that the terms insanity, lunacy, unsoundness of mind, and imbecility, are employed under very different acceptations by lawyers, physicians and medical writers, the critic continues. “and in consequence, witnesses have often seemed to differ widely from each other in their evidence, when in fact the chief difference between them consisted in the meaning that each attached to the vague and unscientific terms sanctioned by the practice of the courts. These inconveniences have been abundantly felt on many recent occasions, and appear, in particular, to have been the origin of the chief difficulties experienced in the late Portsmouth cause. In defence of our medical brethren, and in justification of the awkward appearances they have made, we may safely maintain, that the source of confusion does not lie

* Shelford, p. 5.

† Revised Statutes, vol. 1, p. 52. It is also in use in Pennsylvania. Ashmead's Reports, p. 82. In the matter of O'Brien, a lunatic. In Illinois and New Hampshire the term “*distracted person*,” is used in their statutes to express the state of insanity. (Revised Laws of Illinois, 1833, p. 332. Digested Laws of New Hampshire, 1830, p. 339.)

‡ Revised Statutes, vol. 1, p. 719. Before these distinct enactments, it would not appear to have been entertained by our courts. In *Jackson ex dem. Cadwell v. King*, the Supreme Court said, that idiots, lunatics, or persons *non compos*, are alone persons incapable of contracting, and of such alone, till since the revolution, did even the Court of Chancery entertain jurisdiction. “It does not follow that because, according to the modern doctrine of the Court of Chancery, one would be the proper subject of a commission in nature of a writ *de lunatico inquirendo*, that his acts are void or voidable in a court of law.” (Cowen's Reports, vol. 4, p. 207.)

with them. This has been clearly shown, we think, in a letter addressed a few months ago, by Dr. Haslam to the Lord Chancellor, on account of certain opinions lately expressed by his lordship, with regard to the different states of mind which may justify the issuing of a commission of lunacy. His lordship seems to hold that there are three such states, idiocy, lunacy, and unsoundness of mind. The meaning of the term *Idiocy* can never be mistaken. The word *Lunacy* has also a definite meaning, different from that in which it was originally used, and now comprehends all those who have once been sound in mind, and who still possess the power of reasoning, though on imaginary or false principles. But as to the term *Unsoundness of mind*, as contradistinguished from lunacy on the one hand and from idiocy on the other, we confess that, like Dr. Haslam, we are unable to form a clear conception of it. 'Whatever,' says the Chancellor, 'may be the degree of weakness or imbecility of the party to manage his own affairs, if the finding of the jury is only that he was of an extreme imbecility of mind, that he has an imbecility to manage his own affairs, if they will not proceed to infer from *that*, in their finding upon oath, that he is of unsound mind, they have not established by the result of their inquiry, a case in which the Chancellor can make a grant constituting a committee, either of the person or of the estate. All the cases decide that mere imbecility will not do, unless that imbecility and that incapacity to manage his affairs, amount to evidence that he is of unsound mind, and he must be found to be so.' On carefully considering these expressions, we imagine this *unsoundness of mind* to be nothing else, in strict language, than *imbecility, amounting to an inability to manage one's affairs*, a state which is precisely a minor degree of idiocy, and need not be distinguished from it, except as a mere variety."*

"It is satisfactory, (says a late English writer,) to be able to add that a recent enactment has put an end to much of the ambiguity which thus prevailed respecting weakness of intellect.

* Edinburgh Medical and Surgical Journal, vol. 19, p. 612. Dr. Morrison, (2d edition, p. 28,) presents the following definitions. "*Unsound mind* sufficient to excuse the commission of crime, is marked by delusion—confounds ideas of imagination with those of reality—those of reflection with those of sensation—and mistakes the one for the other. *A weak mind* differs from a strong one in the extent and power of its faculties; but unless there be delusion, it is not considered unsound." These, however, it must be recollected are *medical* definitions, and differ widely from the meaning of the terms in legal parlance.

The statute, 4 William, chap. 60, relative to trustees and mortgagees has introduced a power to issue a commission of lunacy in all cases where an individual is '*incapable of managing his affairs*,' although he be neither proved to be an idiot or a lunatic.*

The methods of proving a person an idiot or non compos, or of unsound mind, are, in every important particular, alike. But in the first, a writ is issued to inquire into the state of the person's mind, and the question of idiocy is tried before the escheator or sheriff, by a jury of twelve men; while the two last have, of late years, been examined by a commission, in the nature of the writ *de idiota inquirendo*, and a jury is summoned by the persons appointed commissioners.† If the result of the commission be a return that the individual is a lunatic, he is then committed to the care of tutors or guardians, who are styled his *committee*.

Should the individual recover his state of sound mind, the chancellor must be petitioned to supersede the commission; and on the hearing of this, the individual should attend, that he may be inspected in person; and it is also usual for the physician to attend, or to make an affidavit *that he is perfectly recovered*.‡

In cases of this description, (civil as contradistinguished from criminal ones,) the important question, as has been well stated by Dr. Conolly, for the physician to decide, is, *whether or not the departure from sound mind be of a nature to justify the confinement of the individual, or the imposition of restraint upon him as regards the use or disposal of his property*?§ This is the point on which the reputation of many physicians has, of late years, been nearly wrecked. I will mention one or two cases that have excited great attention in England, and which are well worthy of consideration.

Mr. Edward Davies was born in low circumstances, and obtained an extremely imperfect education. He was noticed at school as being very shy of his companions, but was not considered stupid. He commenced business as a tea-dealer, and by indefatigable industry and attention to his business, acquired property; but his early habits continued, and he was so habitu-

* Dr. William Cummin. London Med. Gazette, vol. 19, p. 884.

† Highmore on the Law of Idiocy and Lunacy, p. 20, 21.

‡ Highmore, p. 73.

§ Or, to put it in another point of view, the physician and the jury are "to determine, not the mere existence of a mental affection, but the limit at which that affection begins to deprive the individual of the power of proper self-direction; and at which, therefore, it becomes the duty of the law, and of the friends, to step in for his protection." (Medico-Chirurgical Review, vol. 16, p. 512.)

ally anxious and nervous, that the night before the great tea sales at the India House, he could not sleep. He was subject to dyspepsia, and even inclined to hypochondriasis. Finding himself also deficient in education, he endeavoured to acquire information by reading what he took to be the best authors, and as is natural with such persons, was very vain of showing off his late acquisitions, particularly in the way of spouting.

It appears that his mother, even at his advanced period of life, (twenty-seven years,) exercised a complete sway over him. She would not allow him to carry any money in his pocket, nor to spend the most trifling sum without her advice and permission. He dared not go to the play, or leave the house for a few hours, without asking her consent; and indeed she turned him out of his shop, if he displeased her. Foreseeing that if he married, she would be displaced from the management of his house and concerns, she prevented him from seeing young females.

He made many attempts to emancipate himself from this control, by offering large sums of money if she would leave him: but they were all rejected. His health became more and more affected; and Mr. Lawrence, to whom he applied for advice, found his look wild and manner hurried. He used much gesticulation, and expressed a strong antipathy to his mother and several relations, whom he supposed were combining against him. Mr. Lawrence considered him of unsound mind, but that the antipathy to his mother was the chief delusion. The disease would be removed, if he could be reconciled to her.

About this time, his mother placed him under the care of Dr. Burrows, against whom it appears he entertained a strong aversion. He now consulted Dr. Latham on the subject of his supposed insanity. In the conversation with that physician, he used much gesticulation and theatrical gestures; was apprehensive that any one should hear the narrative; spoke of his wealth, and occasionally quoted Byron and Shakspeare. He repeatedly insisted on Dr. Latham's opinion whether he was insane, and threatened vengeance if he did so think. Dr. Latham was inclined, from this interview, to doubt his sanity.

Mr. Davies shortly after left his house, and lodged at an inn, where his appearance was wild, and he awoke the servant in the night, with an idea that there were thieves in the house. He was, however, soon reassured, and went to sleep.

He was soon after confined in a private mad-house, and this

confinement led to an application for his release. Several physicians examined him, (Sir George Tuthill, Dr. Monro, Dr. Macmichael and Dr. Sutherland;) and the majority being of opinion that he was of unsound mind, the Chancellor granted a commission.

The testimony adduced, was principally what has been already stated. The state of his affections was much dwelt on as a proof; so also his having purchased some property at an extravagant rate. He expressed much indignation at his confinement, but was calm and correct in his conversation. It turned out on the trial before the commission, that at the very time when he was about being confined, he gave directions as to his business, and was indeed consulted by the very persons engaged in the application relative to the conduct of that business. The result of the commission was, that Mr. Davies was restored to his liberty and property.

This narrative is gathered from an abstract of the case by one who evidently entertained strong feelings against the correctness of the opinions of the principal medical witnesses, and there possibly may be some colouring given more favourable to the individual implicated, than the testimony warrants. But it is evident, so far as I can judge, that a sufficient inquiry was not made into the state of his domestic relations—of his capacity for business, and above all, of his actual state of mind, previous to the charge of insanity. It is well remarked by the author from whom I am quoting, (and who I believe was Dr. Gooch,) that Davies was always, and probably would continue to be, what we usually call a man of weak mind; but he had capacity sufficient for making money—was inoffensive in his habits, although eccentric, and absolutely indulged in no delusion, unless antipathy to his mother's government was so considered. This, if his history had been properly inquired into, would never have been so denominated. The important rule evidently deducible from the whole, is to ascertain the person's natural character, and to reason from that as to deviations.*

* I have taken the narrative of this case from the Quarterly Review, vol. 42, p. 345. I will remark, that the observations of Dr. Gooch on the testimony of some of the medical witnesses, are frequently too severe. They could only judge from what they witnessed; and though we may recognise the correctness of the abstract principle, that they should have thoroughly informed themselves, yet this is more easily recommended than accomplished. Dr. Duncan, junior, of Edinburgh, seems to have publicly noticed some of the offensive parts of the review. (Lancet, N. S. vol. 6, p. 214.) To avoid the charge of plagiarism, I will state, that the concluding idea in the text, is derived from Dr. A. Combe. "*The true standard*," says he, "*is the pa-*

Another case that equally interested the intelligent portion of the community in England for a time, was that of Miss Bagster. This was in 1832.

Miss Bagster was a young lady of fortune, who perpetrated a runaway match with Mr. Newton. An application was made by her family to dissolve the marriage, on the ground that she was of unsound mind. The facts urged against her before the commissioners were, that she had been a violent, self-willed and passionate child; that this continued as she grew up; that she was totally ignorant of arithmetic, and therefore incapable of taking care of her property: that she had evinced a great fondness for matrimony, having engaged herself to several persons, and that, in many respects, she evinced little of the delicacy becoming her sex. Dr. Sutherland had visited her four times, and came to the conclusion that she was incapable of taking care of herself or of her property. She had memory, but neither judgment nor reasoning power. Dr. Gordon did not consider her capacity to exceed that of a child of seven years of age. Several non-medical witnesses who had known her from infancy, spoke of her extremely passionate, and occasionally indelicate conduct. On her examination, however, before the commissioners, her answers were pertinent and in a proper manner. No indelicate remark escaped from her. Drs. Morrison and Haslam had both visited her, and were not disposed to consider her imbecile or idiotic. She confessed and lamented her ignorance of arithmetic, but said that her grandfather sent excuses when she was at school, and begged that she might not be pressed. Her conversation generally impressed these gentlemen in a favourable manner as to her sanity.

The jury brought in a verdict, that Miss Bagster had been of unsound mind since November 1, 1830, and the marriage was consequently dissolved.

However little we may be disposed to sympathize with Mr. Newton, this certainly would seem to be a hard decision against the female. With a neglected education—indulged in every wish, and growing up under the combined effects of these, she is

tient's own natural character, and not that of the physician or the philosopher." "It is the prolonged departure, without an adequate external cause, from the state of feeling and modes of thinking usual to the individual when in health, that is the true feature of disorder in mind."

persuaded to elope with a person highly offensive to her mother: and in order to dissolve the connexion, the whole history of her life is ransacked for inconsistencies and improprieties. Dr. Morrison said under oath, that he would undertake, in six months, to teach her arithmetic and the use of money. "A deficiency of education," he said, "would account for all the appearances observed in Miss Bagster."*

From the above statement, an idea may be formed of the principles and practice of English law relative to the insane in *Civil cases*:† I come now to notice such as are in force in *CRIMINAL ONES*.

Insanity or idiotism excuses an individual from the guilt of crimes, and he is not chargeable for his own acts, if committed when under these incapacities. "And if a man in his sound memory, commits a capital offence, and before arraignment for it, he becomes mad, he shall not be tried; if after he be tried and found guilty, he loses his senses before judgment, judgment shall not be pronounced; and if after judgment, he becomes of non-sane memory, execution shall be stayed. If there be any doubt whether the person be *compos* or not, this shall be tried by a jury. And if he be so found, a total idiocy, or absolute insanity, excuses from the guilt, and of course from the punishment of any criminal action committed under such deprivation of the senses: *but if a lunatic hath lucid intervals of understanding, he shall answer for what he does in those intervals, as if he had no deficiency.*"‡

The French law makes similar provisions. "It is neither a

* London Medical Gazette, vol. 10, p. 519, 553. London Atlas, newspaper, July 8 and 15, 1832.

In the suit for the dissolution of the marriage of the Earl of Portsmouth, on the ground that he was of *weak*, and afterwards of *unsound* mind, it was proved that his servants were his play-fellows—that he was fond of driving carts, loaded with dung or hay—that he was occasionally extremely cruel to his horses, and his domestics—breaking the leg of his coachman who was lying with it already broken. He had a great desire to bleed persons, carrying lancets with him—would follow funerals, &c.

The commission found him of unsound mind, and the marriage was subsequently dissolved. (Haggard's Ecclesiastical Reports, vol. 1, p. 355.)

† In Scotland, besides the usual provisions as to lunatics and idiots, a legal restraint may be laid on those who by imbecility or weakness of judgment, are considered as fit subjects for it. This is called an *interdiction*, and when under its operation, they are disabled from disposing of their property without the consent of curators. An interesting case of alleged idiocy, but probably coming under the above description, was recently agitated in Scotland. See Mr. Colquhoun's report of Proceedings. Duncan against Yoolow. Edinburgh Med. and Surg. Journal, vol. 49, p. 530.

‡ Blackstone, vol. 4, p. 24.

crime or an offence, if the accused was in a state of insanity (*démence*) at the time of committing the action.”* And even in the remaining particulars, it is practically the same. In the case of a person who had committed murder and afterwards became insane, the judgment was suspended indefinitely. The Procureur-General stated, that although this principle was not expressly adopted in the French code, yet it was contained in the 70th article of a *projet* of a criminal code, submitted for discussion in 1804, and that this justified the course adopted.†

The law at present in force in the state of New York, is similar in most particulars to the English. The chancellor has the care, and provides for the safe keeping of all idiots and lunatics, and of their real and personal estates, so that they and their families may be properly maintained. He is also empowered to dispose of and regulate their property under certain restrictions, and should the lunatic recover, his property is to be restored, but should the idiot or lunatic die, it goes to his heirs or next of kin.‡

Two or more justices are also allowed to cause to be apprehended and kept safely in custody, any persons who by lunacy or otherwise, are furiously mad, or are so far disordered in their senses, that they may be dangerous to be permitted to go abroad. This provision does not, however, restrain or abridge the powers of the chancellor, or prevent any friend or relative of the lunatics, from taking them under their own care and protection.§

The mode pursued of proving a person a lunatic or idiot, is to make an application to the chancellor, who appoints commissioners to inquire into the fact, and they summon a jury to try it, and by their verdict he is guided. He may, however, and has directed an issue to try the allegation of lunacy in the circuit court.||

On the petition of a lunatic to supersede the commission, it may either be referred to a master, to take proof thereon, and examine the lunatic, and to report the proofs and his opinion—or the lunatic is directed to attend in court, to be examined by the chancellor.¶

* Code Penal, art. 64. † Causes Célèbres par Mejan, vol. 6, p. 310.

‡ Revised Laws, vol. 1, p. 147. Revised Statutes, vol. 2, p. 52.

§ Revised Laws, vol. 1, p. 116. Revised Statutes, vol. 1, p. 635.

|| In the matter of Wendell, a lunatic. Johnson's Chancery Reports, vol. 1, p. 600.

¶ In the matter of Hanks, a lunatic. Johnson's Chancery Reports, vol. 3, p. 567.

A case further illustrative of this, occurred in 1836, before the Supreme Court of Massachusetts, which has the powers of Chancery.

Andrew C. Davidson, confined in the State Lunatic Asylum, was at his own re-

As to criminal cases, the broad principle, of want of responsibility is laid down. "No act done by a person in a state of insanity can be punished, as an offence, and no insane person can be tried, sentenced to any punishment, or punished for any crime or offence which he commits in that state."* Some special provisions have also been recently enacted. If any convict after he is sentenced to the punishment of death, shall become insane, the sheriff, with the concurrence of the circuit judge, shall summon a jury of twelve electors, to inquire into the same, and he must give notice of this inquisition to the district attorney, who can subpoena witnesses. If found insane, the sheriff shall transmit the inquisition to the Governor, who can order the execution, in case the convict recovers.†

If a convict in a county prison becomes insane, he is to be transferred to the superintendents of the poor, and if one in a state prison, he may be removed to the New York Lunatic Asylum, at the expense of the state.‡

In other states, where no separate equity jurisdiction exists, the examination and guardianship of these individuals, is usually confided to high judicial tribunals, or to officers specially appointed for that purpose.§

The common law of England is, however, generally the guide by which civil and criminal cases are decided in this country. It is the basis on which our statute laws are founded, and it is hence important, that its peculiarities be distinctly understood.

quest brought up on a writ of *habeas corpus*, and the superintendent summoned to show cause of detention.

Mr. Davidson was a well educated man, aged 45, and had been esteemed amiable and intelligent, but became embarrassed in his circumstances, and finally intemperate. His insanity consisted in *false hearing*. He supposed that his tenant used insulting language, and this delusion extended to his family. He became very passionate, and particularly to those who denied that they heard the noises of which he complained.

He was sent to the hospital in 1834, was discharged—appeared well, but the illusion returned, and he was again confined. He now persists in believing that these sounds are transmitted through a great extent of space, and deems his own organs more perfect in hearing them. On all other subjects, he is rational and intelligent. No one would suspect his insanity, when with strangers. The court remanded him, not deeming it safe that he be at large, especially with reference to those by whom he supposes himself injured and insulted. *Boston Med. and Surg. Journal*, vol. 14, p. 352.

* Revised Statutes, vol. 2, p. 697.

† Revised Statutes, vol. 2, p. 658.

‡ Revised Statutes, vol. 2, p. 756, 771.

§ The following is made a crime in Ohio: "Having carnal intercourse with an insane woman, not the offender's wife, he being over 18 years of age. The punishment is confinement in the penitentiary from 3 to 10 years." (*American Quarterly Review*, vol. 10, p. 41.)

The most striking are the distinctions that are made between civil and criminal cases. The reader has doubtless already observed, that in the latter, the testimony of others is sufficient to establish the insanity of the prisoner. But under a writ *de lunatico inquirendo* as happens in civil cases, the supposed insane is usually brought before the commission and jury to be examined by them, and to satisfy them as to his or her state.

In the instance of Lady Kirkwall, for example, of undoubted and long insanity, but whose case was one of property, the commission spent eight entire days in this inquiry.* How different the proceeding is, when the individual is accused of crime, needs not to be mentioned.

There is a still more striking distinction. If a lunatic be *perfectly recovered* and not otherwise, his property is to be restored to him.† But in criminal cases, if he exhibits a *lucid interval* of understanding, he may be punished for acts committed during its presence, in the same manner as a sane person is punished. It will hence be proper to offer a few remarks on what is understood by a lucid interval.

The term itself is, with great appearance of probability, supposed by Dr. Haslam to be connected with, and originate from, the ancient theory on the subject of *lunacy*. The patient became insane, as was supposed, at particular changes of the moon, and the inference was natural, that in the intervening spaces of time, he would be rational.‡ This, however, is an opinion long since abandoned. Observers have repeatedly noticed, that the access of the paroxysms has no connexion with the phenomenon in question, and our author expressly states, that he kept an exact register for more than two years, but without finding in any instance that the aberrations of the human intellect correspond with, or were influenced by, the vicissitudes of the moon. Esquirol observes, that in respect to lunar influence, he cannot confirm the long prevalent opinion. The insane, he adds, are certainly more agitated about the full moon, but so they are about

* London Med. Gazette, vol. 17, p. 816.

† In *ex parte* Atkinson, in the matter of Parkinson, the jury under a commission of lunacy against Parkinson, returned "that the said T. Parkinson at the time of taking this inquisition is a lunatic, enjoying lucid intervals, and during such lucid intervals, he is competent to the government of himself and the administration of his own affairs." The Lord Chancellor (Eldon) refused on this to grant a committee, and issued a new commission. (Jacob's Chancery Reports, vol. 1, p. 333.)

‡ Haslam on Madness, p. 214.

day-break every morning. Hence he conceives the *light* to be the cause of the increased excitement at both these periods. Light, he asserts, frightens some lunatics, pleases others, but agitates all.*

If then the theory on which the term is founded, and the practical deduction from it are both incorrect, what are we to understand by the term itself at the present day, in legal proceedings? I answer this by some quotations from the writings of distinguished advocates and enlightened physicians.

Daguesseau, one of the greatest names in French jurisprudence, thus defines it: "It must not be a superficial tranquillity, a shadow of repose; but on the contrary, a profound tranquillity, a real repose; it must be, not a mere ray of reason, which only makes its absence more apparent when it is gone—not a flash of lightning, which pierces through the darkness only to render it more gloomy and dismal—not a glimmering which unites the night to the day; but a perfect light, a lively and continued lustre, a full and entire day, interposed between the two separate nights of the fury which precedes and follows it: and, to use another image, it is not a deceitful and faithless stillness which follows or forebodes a storm, but a sure and steadfast tranquillity for a time, a real calm, a perfect serenity; in fine, without looking for so many metaphors to represent our idea, it must be not a mere diminution, a remission of the complaint, but a kind of temporary cure, an intermission so clearly marked as in every respect to resemble the restoration of health. So much for its *nature*."

"And as it is impossible to judge in a moment, of the quality of an interval, it is requisite that there should be a sufficient length of time for giving a perfect assurance of the temporary re-establishment of reason, which it is not possible to define in general, and which depends upon the different kinds of fury; but it is certain there must be a time, and a considerable time: So much for its *duration*."†

"To determine the existence of a lucid interval in insanity,"

* *Medico-Chirurgical Review*, vol. 1, p. 251.

† *Highmore on the Law of Idiocy and Lunacy*, p. 6.

In further noticing this subject, he remarks, that "much of the difficulty of discriminating arises from confounding a *sensible action* with a *lucid interval*. An action may be sensible in appearance, without the author of it being sensible in fact; but an interval cannot be perfect, unless you can conclude from it, that the person in whom it appears is in a state of sanity. The action is only a rapid and momentary effect; the interval continues and supports itself: the action only marks a

says Percival, "the testimony of a physician is sometimes required in courts of law. The complete remission of madness is only to be decided by reiterated and attentive observation. Every action, and even gesture of the patient, should be sedulously watched; and he should be drawn into conversations at different times, that may insensibly lead him to develop the false impressions under which he labours. He should also be employed occasionally in business or offices connected with, or likely to renew his wrong associations. If these trials produce no recurrence of insanity, he may, with full assurance, be regarded as legally *compos mentis* during such period, even though he should relapse a short time afterwards into his former madness."*

"I should define," says Haslam, "a *lucid interval* to be a complete recovery of the patient's intellects, ascertained by repeated examinations of his conversation, and by constant observation of his conduct, for a time sufficient to enable the superintendent to form a correct judgment. If the person who is to examine the state of the patient's mind, be unacquainted with his peculiar opinions, he may be easily deceived; because, wanting this information, he will have no clue to direct his inquiries, and madmen do not always nor immediately intrude their incoherent notions. They have sometimes such a high degree of control over their minds, that when they have any particular purpose to carry, they will affect to renounce those opinions which shall have been judged inconsistent; and it is well known that they have often dissembled their resentment, until a favourable opportunity has occurred of gratifying their revenge."†

single fact; the interval is a state composed of a succession of actions." And again: "If it was true that a proof of some sensible action was sufficient to induce a presumption of lucid intervals, it must be concluded that those who allege insanity could never gain their cause, and that those who maintain the contrary could never lose it; for a cause must be very badly off, in which they could not get some witnesses to speak of sensible actions. A reasonable action is an act—an interval is a state—the act of reason may subsist with the habit of madness; and if it were not so, a state of folly could never be proved." (Pothier's Treatise on the Law of Obligations, vol. 2, appendix 19, p. 670. London, 1806.)

* Percival's Medical Ethics, p. 214.

† Haslam on Madness, p. 46 and 52. Dr. Burrows, however, remarks on such an opinion, as follows: "Some contend that there is no such thing in insanity as a lucid interval; that is, a person must be sane or insane. This is the *reductio ad absurdum*; for who, accustomed to insane people, will deny that intervals of sanity do occur, and that, during such period, a person is in full possession of his faculties? This interval may be of so short a duration as a few hours, or a day or more; and yet, as the paroxysm uniformly returns, it is obviously the continuation of the same morbid action. Do we not admit that fevers have perfect intermissions? But do we pronounce the patient, therefore, freed from his insanity? Thomas Willis describes

Lord Thurlow has also, with great clearness, stated *what should be the state present to constitute an actual lucid interval*. "By a perfect interval," says he, "I do not mean a cooler moment, an abatement of pain or violence, or of a higher state of torture—a mind relieved from excessive pressure; but an interval in which the mind, having thrown off the disease, has recovered its general habit."

"The burthen of proof," he adds, "attaches on the party alleging such lucid intervals, who must show sanity and competence at the period when the act was done, and to which the lucid interval refers, and it is certainly of equal importance that the evidence in support of the allegation of a lucid interval, after derangement at any period has been established, should be as strong and demonstrative of such fact, as where the object of the proof is to establish derangement. The evidence in such a case, applying to stated intervals, ought to go to the state and habit of the person, and not to the accidental interview of any individual, or to the degree of self-possession in any particular act.*

a lucid interval as a perfect return of a sound mind during the intermission, or so long as the mania ceases; and this, in my opinion, is an accurate definition." (Burrow's Commentaries on Insanity, p. 280.)

In conformity to the above, are the observations of Dr. Ray. The lucid intervals in insanity, he observes, are with great justice, resembled to the intermissions in intermittent fever, or the periods between the attacks of epileptic fits. The patient still labours under the disease, although the leading symptom is for the time absent. He therefore condemns the too broad assertion of Dr. Haslam. During these periods of apparent reason, there is a weakness of mind remaining, or what Dr. Combe styles an irritability of the brain. As to the commission of crime during the *lucid interval*, Dr. Ray remarks, that crimes are generally the result of momentary excitement produced by sudden provocations. These provocations put an end to the temporary cure by immediately reproducing that pathological condition of the brain, called irritation, and this irritation is the essential cause of mental derangement, which absolves from all the legal consequences of crime. The conclusion from this is, that we *ought never, perhaps, to convict for a crime committed during the lucid interval*. The difference between a person in the lucid interval, and one who has never been insane is, that while in the latter, the passions are excited to the highest degree of which they are capable in a state of health, though still more or less under his control; they produce in the former, a pathological change which deprives him of every thing like moral liberty. Ray's Med. Jurisp. of Insanity, chap. 14. American Jurist, vol. 18, p. 390.

* Brown's Chancery Cases, vol. 3, p. 443, 444. The Attorney-General v. Parnter. Lord Eldon has, however, intimated his disagreement from Lord Thurlow's proposition. *Ex parte Holyland*, Vesey's Reports, vol. 11, p. 10. And in a late trial (July 20, 1822,) in chancery, he has still more openly avowed his opposition to it. The following are stated to have been his words: "With regard to what might be a lucid interval, it was a point of some difficulty. He could never go the length of Lord Thurlow in the case of Barker. (This is the case quoted above, Attorney-General v. Parnter.) That noble lord was of opinion, that if the existence of insanity was once established, the evidence of a lucid interval ought to be as clear as the evidence in support of the lunacy. He remembered putting the matter thus to Lord Thurlow: 'I have seen you exercising the duties of Lord Chancellor with ample

On the other hand, somewhat differing from the above opinions, Sir John Nicholl in a late decision, observes, "nor am I able exactly to understand what is meant by a 'lucid interval,' if it does not take place when no symptom of delusion can be called forth at the time. How but by the manifestation of the delusion, is the insanity proved to exist at any one time. The disorder may not be permanently and altogether eradicated—it may only intermit—it may be liable to return, but if the mind is apparently rational upon all subjects, and no symptoms of delusion can be called forth on any subject, the disorder is for that time absent, there is then an interval, if there be any such as a lucid interval. It may often be difficult to prove a lucid interval, because it is difficult to ascertain the total absence of delusion."*

Such then is the construction attached to the term *lucid interval* in civil cases, but its signification is narrowed down in crimi-

sufficiency of mind and understanding, and with the greatest ability. Now if Providence should afflict you with a fever, which should have the effect of taking away that sanity of mind for a considerable time, (for it does not signify whether it is the disease insanity, or a fever that makes you insane,) would any one say that it required such very strong evidence to show that your mind was restored to the power of performing such an act as making a will—an act, to the performance of which a person of ordinary intelligence is competent?" His Lordship observed upon the case of Mr. Cogland: he was a person who lived in Prince's street, Oxford road, and a fire happening in his house, he was taken out of a two pair of stairs window: it had such an effect upon him, that he became insane. He afterwards made his will in a house kept by a person who had the care of lunatics. His will was precisely according to what he had previously told Mr. Winter, the bank solicitor, he had intended to make. He had stated to him what provisions he had made, and what he intended to make, and his will was in conformity with what he had so stated of his ideas of justice. The will was contested, on the ground that it was not made during a lucid interval; but the delegates were of opinion, that as it was a will effecting the very purposes he had before expressed, it was a good will—for these reasons, he could not agree in the doctrine of Lord Thurlow." *In the matter of Parkinson, a lunatic.* (Albion newspaper of the 7th of Sept. 1822, extracted from an English paper.) In the course of the pleadings, it was mentioned that Dr. Powell, an eminent physician in London, and for many years secretary to the commissioners for licensing mad-houses, held *there was no such thing as a lucid interval*, (in the ordinary acceptation of the term, I presume.) Dr. Powell probably holds the same opinion that Dr. Haslam does.

"Hoffbauer, after stating that during a lucid interval, a lunatic ought to be held responsible for his actions, and to be esteemed able to make legal contracts, observes, 'that we must not act too strictly upon this opinion, although it is *generally* correct, for however a lunatic may be in possession of his mental powers, there may be still an inaccurate conception of his present state remaining, at least in connexion with former events.'

"In the present complicated state of society, when the slightest error may endanger the happiness and welfare of a whole family, it is highly important to keep the above remark in remembrance. An individual may greatly have recovered, and yet not so far as to be safely trusted with the management of his own affairs. Upon the whole, therefore, Lord Thurlow's opinion is safer and more consonant with our present knowledge of the phenomena of insanity, than Lord Eldon's. The editor refers the reader to the work lately published by Dr. Burrows, for some useful observations upon the criterion of recovery from insanity."—DARWALL.

* 3 Haggard's Reports, p. 575. Wheeler and Batsford v. Alderson.

nal ones. Lord Hale, with reference to these, makes a distinction between total and partial insanity; by the first, he understands a perfect form of the disease, and by the last, the presence of so much reason and understanding as will make the individual accountable for his actions. It is allowed by all commentators "that the line which divides them is invisible, and cannot be defined; yet one or other of these states must be collected from the circumstances of each particular case, duly to be weighed by the judge and jury."* Sir Vicary Gibbs, when attorney-general of England, and trying Bellingham for the murder of the Hon. Spencer Percival, used the following language: "A man may be deranged in his mind—his intellects may be insufficient for enabling him to conduct the common affairs of life, such as disposing of his property, or judging of the claims which his respective relations have upon him; and if he be so, the administration of the country will take his affairs into their management, and appoint to him trustees; but at the same time, such a man is not discharged from his responsibility for criminal acts. I say this upon the authority of the first sages in this country, and upon the authority of the established law in all times, which law has never been questioned, that although a man be incapable of conducting his own affairs, he may still be answerable for his criminal acts, *if he possess a mind capable of distinguishing right from wrong.*"†

Lord Chief Justice Mansfield, in his charge to the jury on the same trial, observed that "there were various species of insanity. Some human beings were void of all power of reasoning from

* Collinson on Lunacy, vol. 1, p. 475. In the case of Hadfield, who was tried, in 1800, for shooting at George III. in Drury-lane theatre, it appeared that his insanity had been of some years' standing, owing to a wound of the head received in battle—that he had repeatedly in these paroxysms attempted murder—that a day or two before the act, he attempted to kill his own child. Lord Kenyon held that as he was deranged immediately before the offence was committed, it was improbable that he had recovered his senses in the interim; and although, were they to run into nicety, proof might be demanded of his insanity at the precise moment when the act was committed, yet there being no reason for believing him to have been at that period, a rational and accountable being, he ought to be acquitted; and the jury accordingly acquitted him. Ibid, vol. 1, p. 488.

Hadfield shot at the King on the persuasion of Truelock, a maniac, who prophesied that the Messiah should proceed from his mouth, and told Hadfield that the only obstacle was the King, and who must first be despatched. They both became tenants of Bedlam for life. Hadfield was still alive in 1823, and may be at present. At the time now referred to, he did not evince any symptoms of insanity, but his impatience of confinement had soured his temper, and he was constantly grumbling and discontented. He was cleanly and regular in his habits, and made handsome straw baskets, which he sold. (Sketches in Bedlam, London, 1823, p. 18.)

† Collinson on Lunacy, vol. 1, p. 657.

their birth; such could not be guilty of any crime. There was another species of madness, in which persons were subject to temporary paroxysms, in which they were guilty of acts of extravagance: this was called lunacy. If these persons were to commit a crime when they were not affected with the malady, they would be, to all intents and purposes, amenable to justice. So long as they could distinguish good from evil, so long would they be answerable for their conduct. *There was a third species of insanity*, in which the patient fancied the existence of injury, and sought an opportunity of gratifying revenge by some hostile act. If such a person were capable, in other respects, of distinguishing *right from wrong*, there was no excuse for any act of atrocity which he might commit under this description of derangement.”*

Sir John Nicholl, in the case of *Dew v. Clark*, which I shall hereafter notice, takes the following distinction between the responsibility of lunatics in civil and criminal cases. “The true criterion in these cases is, where there is delusion of mind, there is insanity; that is, when persons believe things to exist which exist only, or at least in that degree exist only, in their own imagination, and of the non-existence of which, neither argument nor proof can convince them, they are of unsound mind, or as one of the counsel has accurately expressed it, “it is only the belief of facts, which no rational person would have believed, that is insane delusion.” This delusion may sometimes exist in one or two particular subjects, though generally there are other concomitant circumstances, such as eccentricity, irritability, violence, suspicion, exaggeration, inconsistency, and other marks and symptoms which may tend to confirm the existence of delusion, and to establish its insane character. The law then does recognize partial insanity in the sense already stated, and in civil cases, this partial insanity, if existing at the time the act is done—if there be no clear lucid interval—invalidates the act, though not directly connected with the act itself; but in criminal cases, it does not excuse from responsibility, unless the insanity is proved to be the very cause of the act.”

* Collinson on Lunacy, vol. 1, p. 672. Dr. James Sims states, that he has seen an account of a trial for a capital offence, in which the judge stated that no murderer could be deemed insane, who knew that it was a man and not a dog or a cat, that he killed. Dr. Sims on the contrary asserts, that no madman ever made this mistake. (Memoirs Medical Society of London, vol. 5, p. 372.)

These are the principles by which the criminal jurisprudence of England and this country is guided, in cases of insanity. The question to be considered in each case, as will be seen by the above quotations is, whether the criminal is capable of distinguishing between *right and wrong*. Is not this the same as inquiring whether he is a moral agent? And how are we to infer this, and who are to be the judges of this capacity or incapacity? I apprehend it must be the jury, and I recommend, in accordance with the advice of Professor Amos, that the medical witness should decline answering this question, and confine himself to an opinion as to the presence or absence of insanity at the commission of the act. Let the rest be a matter of inference, deduced from the nature of the case.*

There are some English trials in addition to those already quoted, which will illustrate the practical operation of the English law. One was that of Earl Ferrers, who was tried before the House of Lords, in 1760, for the murder of Mr. Johnson, his steward. It was proved that his lordship was occasionally insane, and incapable from his insanity of knowing what he did, and of judging the consequences of his actions. He had harboured enmity against Johnson for some time, but dissembled it, so that it was not suspected, or at least was supposed to have been forgotten. Johnson waited upon him by appointment, and when alone in the room with the Earl, the latter, with great deliberation, told him his time was come; and taking a pistol, inflicted a mortal wound. A verdict of guilty was found, and the earl was executed.†

Edward Arnold was indicted for maliciously shooting at Lord Onslow. He had for years harboured an idea that Lord Onslow was an enemy to him, and in consequence had formed a regular, steady design to murder him, and had prepared the means for carrying this into effect. And yet there was no doubt, that to a certain extent, he was deranged. He also was found guilty; but, at Lord Onslow's request, was reprieved and confined in prison until his death.‡

Again, in *Rex v. Offord*, who was tried at the Bury Assizes,

* London Medical Gazette, vol. 8, p. 421. Haslam relates some cases of insanity in which acts of violence or suicide had been attempted, and the patients after their recovery, stated that they had not the slightest remembrance of these acts. Certainly such could not judge of what was right or wrong.

† Hargrave's State Trials, vol. 10, p. 478. ‡ Collinson on Lunacy, vol. 1, p. 476.

(1831), before Lord Chief Baron Lyndhurst for murder, by shooting with a gun ; the defence was insanity. It appeared that the prisoner laboured under a notion that the inhabitants of his town, and particularly the deceased, were continually issuing warrants against him, to deprive him of his liberty and life : that he would frequently, under the same notion, abuse people in the street, and with whom he never had any dealings or acquaintance of any kind. In his waistcoat pocket a paper was found, headed " List of Hadleigh Conspirators against my life ;" and among these were the names of the deceased and his family. Several medical witnesses deposed to their belief, that from the evidence they had heard, the prisoner laboured under that species of insanity which is called *monomania*, and that he committed the act while under the influence of that disorder, and might not be aware that, in firing the gun, his act involved the crime of murder.

Lord Lyndhurst told the jury, that they must be satisfied, before they could acquit the prisoner on the ground of insanity, that he did not know, when he committed the act, what the effect of it, if fatal, would be, with reference to the crime of murder. The question was, did he know that he was committing an offence against the laws of God and nature ? His lordship referred to the doctrine laid down in Bellingham's case by Sir James Mansfield and expressed his complete accordance in the observations of that learned judge. The jury acquitted the prisoner on the ground of insanity.*

Lord Erskine, in his famous speech on the trial of Hadfield, proposed the following distinction. To absolve from criminal responsibility, there must first be *delusion*, and secondly, the *delusion* and the act must be connected. Valuable as is this suggestion, yet it must be understood, that there are cases in which no connexion of this description can be shown, and indeed from the nature of the disease, it is often impracticable to prove it. We may be satisfied as to the insanity (partial or total) and yet not be able to trace its union with the act that constitutes the subject of investigation. The difficulty is increased when we take into account the form of insanity which most commonly leads to the perpetration of acts of homicide. It is that of melancholy, where the mind broods often in silence over a single idea, and

* Carrington and Payne's Reports, vol. 5, p. 168.

that idea may be his own destruction, or the destruction of others. Its similitude to the effects of passion, and indeed of deliberate crime, is often so near, that we can hardly appreciate the difference. "Of methodical madness, of systematic perversion of intellect," says Haslam, "the multitude can form no adequate conception, and cannot be persuaded that insanity exists without turbulent expression, extravagant gesture, or fantastic decoration."

What can be more alike than the anger of the sane and the insane? What a similitude between the maniac and the habitually passionate, between the melancholic and him who habitually broods over his malignant and revengeful conceptions.* In fine, if madness were not stamped on its front, would not the following be ranked among the foulest and most deliberate murders? It is taken from the mouth of the maniac himself, as stated to Dr. Haslam. "The man whom I stabbed, richly deserved it. He behaved to me with great violence and cruelty: he degraded my nature as a human being; he tied me down, handcuffed me, and confined my hands much higher than my head, with a leathern thong; he stretched me on a bed of torture. After some days he released me. I gave him warning, for I told his wife I would have justice of him. On her communicating this to him, he came to me in a furious passion, threw me down, dragged me through the court-yard, thumped me on my breast, and confined me in a dark and damp cell. Not liking this situation, I was induced to play the hypocrite. I pretended extreme sorrow for having threatened him, and by an affectation of repentance, prevailed on him to release me. For several days I paid him great attention, and lent him every assistance. He seemed much pleased with the flattery, and became very friendly in his behaviour towards me. Going one day into the kitchen, where his wife was busied, I saw a knife; (this was too great a temptation to be resisted,) I concealed it, and carried it about me. For some time afterwards the same friendly intercourse was maintained between us, but as he was one day unlocking

* In speaking of Carlos, son of Philip of Spain, Sir James Mackintosh remarks, "The clouds which always darkened his feeble reason might sometimes quench it. The subtle and shifting transformations of wild passion into maniacal disease, the return of the maniac to the scarcely more healthy state of stupid anger, and the character to be given to acts done by him when near the varying frontier which separates lunacy from malignity, are matters which have defied all the experience and sagacity of the world." (*History of England*, vol. 3, p. 36.)

his garden-door, I seized the opportunity, and plunged the knife up to the hilt in his back.”*

It is from long continued and anxious reflection on the difficulties which thus present themselves to the consideration of the medical witness, that I am led to withdraw much of the objection that I have felt and expressed against the *dictum* of the English law on this subject. There must be some rule to guard the sacred interests of society; something to repress and keep in check, that tendency to “shed the blood of his fellow,” which unfortunately is too common, and at the same time, humanity forbids that the horrid spectacle should be permitted of taking away the life of the insane by judicial process. Let the question put by Lord Lyndhurst, be presented to every jury; *did the prisoner know, that in doing the act, he offended against the laws of God and man?* Let the following remarks of the Scotch Law Commentators on this subject, be kept in mind, and with the acknowledged mildness of our laws, and the unwillingness to convict capitally, I feel a strong conviction that no practical injustice will be done. But to aid in effecting all this, it is very necessary that the medical witness should have every facility allowed him for studying the nature of the case, and that its history should be well ascertained. Need I add that juries should be carefully instructed as to this particular form of insanity.

“Whether it should be added to the description,” says Baron Hume, “that he must have lost all knowledge of good and evil, right and wrong; this is a more delicate question, and fit perhaps to be resolved differently according to the sense in which it is understood. If it be put in this sense, in a case, for instance of murder; did the pannel (prisoner) know that murder was a crime? Would he have answered on the question that it was wrong to kill a neighbour? This is hardly to be reputed a just criterion of such a state of soundness, as ought to make a man accountable in law for his actions. Because it may happen, a person to answer in this way, who yet is so absolutely mad, as to have lost all true observation of facts, all understanding of the good or evil intentions of those who are about him, or even the knowledge of their persons. But if the question be put in this other and more special sense, as relative to the very act done by

* Haslam on Madness, p. 169.

the pannel, and the particular situation in which he conceived himself at that time to stand, did he at the moment of doing that thing, understand the evil of it? was he impressed with the consciousness of guilt and fear of punishment? It is then a pertinent and material question, but which cannot to any substantial purpose be answered, without taking into consideration the whole circumstances of the situation. Every judgment in the matter of right and wrong, supposes a case or state of facts to which it applies, and though the pannel have that vestige of reason, which may enable him to answer in the general that murder is a crime, yet if he cannot distinguish his friend from his enemy, but conceive every thing about him to be the reverse of what it really is, and mistake the illusions of his fancy for realities, with respect to his own condition and that of others, '*absurda et tristia sibi dicens atque fingens*,' these remains of intellect are thus of no use to him towards the government of his actions, nor in any way enable him to form a judgment upon any particular situation, or conjuncture, of what is right or wrong with regard to it. Proceeding as it does on a false case or conjuration of his own fancy, his judgment of right and wrong as to any responsibility that should attend it, is truly the same as none at all. It is therefore only in this complex and appropriated sense, as relative to the thing done and the situation of the pannel's feelings and consciousness on that occasion, that this inquiry concerning his intelligence of moral good and evil is material, and not in any other or larger sense."*

Alison observes, "few men are mad about others or things in general; many about themselves. Although, therefore, the pannel understands perfectly the distinction of right and wrong, yet if he labours, as is generally the case, under an illusion and deception as to his own particular case, and is thereby disabled from applying it correctly to his own conduct, he is in that state of mental alienation which renders him not criminally answerable for his actions."†

* Hume's Commentaries, vol. 1, p. 24, 25.

† Alison's Principles of the Criminal Law of Scotland, p. 645.

The legal reader will readily perceive the difference between the English and Scotch opinions on this subject. Sir James Mansfield held that Bellingham was accountable, because *he knew murder was a crime, and could distinguish right from wrong*. "On this case," says Mr. Alison, "it may be observed, that unquestionably the mere fancying a series of injuries to have been received, will not serve as an excuse for murder, for this plain reason, that supposing it true that such injuries had

I am aware, that in expressing the above opinions on the subject of criminal responsibility, I do not agree with many of the ablest and most experienced of the profession, and the reader should distinctly understand this. He should also be apprised, that with all the cautions I have added, the fearful consequence *may*, in some cases, through mistake as to the absence of insanity, be a *judicial murder*. Considering the difficulties that envelope the subject, and the possibility that I may be wrong in what I have advanced, it is of course my indispensable duty to give a full and fair statement of the opinions of those who object to our law as it stands at present, and who conceive that its result has been in many cases, and will be hereafter if continued to be thus applied, to punish the insane as criminals.

The argument urged, as far as I understand it, is briefly this: If insanity is proved to have existed, its presence should absolve from responsibility. The disease is so intricate in its nature, its symptoms are so liable to be mistaken, that the hazard is too great to punish an individual in whom we have once recognized its existence, merely because he seemed at the time to be rational. The act itself is a manifestation of insanity. Why then introduce the doctrine of his ability of judging between right and wrong, which, it must be conceded, can only be inferred from conversation and conduct? Such, I believe, is the general train of reasoning adopted. But it will be more satisfactory to quote the exact words of one of the ablest advocates of this opinion.

“If it be true, that there is none of the phenomena of yet imperfectly understood human nature, over which hangs a thicker veil to the general eye, than the phenomena of mental aberration, what are we to think of making distinctions, as if all were clear, between *partial* and total insanity, and drawing the line of responsibility with perfect confidence? We humbly but earnestly suggest, that instead of deciding for responsibility in partial insanity, it is both more just and more merciful to doubt as to that essential, when DISEASE OF MIND, TO A PALPABLE AND CONSIDERABLE

been received, they would have furnished no excuse for the shedding of blood; but on the other hand such an illusion as deprives the pannel of the sense of *what he did* was wrong, amounts to legal insanity, although he was perfectly aware that murder in general was a crime, and therefore the law appears to have been more correctly laid down in the case of Hadfield, than in this instance.” (Edinburgh Law Journal, vol. I, p. 524.) It is the opinion of many physicians in England, that Bellingham was insane when he murdered Mr. Percival.

AMOUNT, IS PROVED. It is more just and more merciful, in such a case, to take care of the accused and of society by his confinement, than to run the risk of putting to death an irresponsible agent. Insanity, as far as we have the means of perceiving, is a bodily disease; in other words, its visible and invariable condition is a morbid action of the brain, either structural or functional. A definition of the effect, in feeling and manifestation, of a diseased brain, which shall be sufficiently comprehensive to include all the varieties of insane affection, is scarcely to be looked for; yet definitions are constantly sought after in courts of law, and the whole value of a witness's evidence is often made to turn on its relation to a standard, which is in itself the merest assumption. It would be a safer rule for courts of law to direct their attention to the proof generally of diseased manifestations of the intellect and feelings; and when these are undoubted, to presume irresponsibility, because the contrary cannot be made sure of, and the balance of probability is greatly on the side of irresponsibility. If mercy is often extended to youth, to seduction, even to great provocation, how much more ought it to shelter disease of the mind when clearly established? If it be true, and no physician denies it, that to diseases of the inflammatory class it is impossible to prescribe limits, or to predict that new and aggravated symptoms shall not suddenly follow in the course of the diseased action, is it not presuming too much to decide that inflammation of the brain, a usual cause of insanity, has known boundaries, and shall not suddenly extend from partial to produce total insanity? We feel assured that no one conversant with insanity will deny the fact, that the insane, however partially, are not safe from sudden paroxysms and aggravations of symptoms.”*

In applying this argument, cases are adduced which it will be useful to review. Out of a great multitude, I will principally select such as have excited peculiar interest of late years in different countries.

Robert Dean was a young man of weak intellect and strong animal passions. He became warmly attached to a female superior in station to himself, and was rejected. This caused un-

* “Observations on the degree of knowledge yet applied to the plea of Insanity, in trials for crimes.” (*Edinburgh Law Journal*, vol. 1, p. 542.)

The paper from which this is a quotation, was written by James Simpson Esq., of Edinburgh, and is republished in the appendix to his work on Popular Education.

governable feelings of revenge, and he determined on her murder. He had at the same time some religious ideas, and it occurred to him, that by putting this woman to death, he would send an unprepared sinner into eternity. But the impulse to shed blood had taken irresistible possession of him. There was a child of which he was very fond and had often caressed, who he concluded, had fewer sins to answer for, and this he determined should be the victim. He murdered it, and then gave himself up to justice. He was tried, condemned and executed in the county of Surrey, (England,) in 1819. "The act, itself a sufficient proof of insanity, was strengthened by insane notions and actions, and absolute raving even on the scaffold."*

John Howison, aged 45 years, a sturdy beggar, but formerly a hawker of small wares, was tried before the High Court of Justiciary in Scotland, December 31, 1831, for the murder of the widow Geddes, on the 2d of the same month. For a fortnight before the fatal act, he was wandering round the country, and no evidence of the state of his mind during that time was obtained *before* the trial. He entered the village where Mrs. Geddes (and who was an aged woman) resided, with a black handkerchief covering the lower part of his face, (which it was his constant practice so to wear,) a stick in his hand, and a book hanging from his wrist. He asked alms from several persons, without success; was seen to enter the cottage, and in a very

* The melancholy results of fanaticism with which the history of almost every age and every nation is so rife, are but other modifications of this homicidal insanity. Weak, ignorant or ill-balanced minds are overcome by the ravings of impostors or monomaniacs; the feelings and affections are crushed by what they are taught and verily believe to be now their duty, and they pursue this to the wildest verge of acting and suffering. Thus in Denmark, during the middle of the last century, a large number of individuals were found, who imagined that by committing premeditated murder, and being afterwards condemned to die, they would be the better able, by public marks of repentance and conversion as they went to the scaffold, to prepare themselves for death and work out their salvation. They generally selected children, to avoid sending any one out of the world in an unprepared state. Capital punishment of course could not stop this. It was what they wished for. The King issued an ordinance, directing that those who were guilty should be branded on the forehead with a hot iron and whipped, and then confined for life at hard labour in the House of Correction. Every year, on the day of their crime, they were to be publicly whipped. (Quarterly Review, vol. 12, p. 219. London Magazine, 1768.)

I need hardly mention the frequency of suicide, resulting directly as a consequence of these wild imaginations, while on the boundary line between crime and insanity, is that indefatigable spirit of slander which pursues every person who "believes a little more or a little less" than the prevailing object of excitement, in his character and his means of subsistence. Such men are only prevented by the fear of consequences, and the freedom of our institutions, from becoming inquisitors. They have all the elements of monomania within them, and I am much mistaken if it be not in many, the termination.

brief space to come out again hurriedly, shut the door after him, and run from the village, quickening his pace when he thought himself observed. One witness heard the sound of a blow, when Howison was in the cottage. He had murdered her by striking on the head with the sharp edge of a spade, and thus dividing it nearly in two.

He was apprehended the next day, some two or three miles from the place, and when taken, denied all knowledge of the murder, and said he had come from Glasgow. It did not appear that he had taken a single article from the cottage, although there was some money open in a cup.

Howison was visited by Dr. Spens and Mr. Watson several times before the trial, but they could discover no indications of insanity—no hallucination—no disorder of intellect. He appeared, however, to be of low and weak intellect, and to be possessed of a great deal of cunning.

On the trial, it was proved by a woman with whom he had lodged six years previously, that when she first knew him he was a hawker of small wares, clean in his person, and like other people. He then left her to go to England, where he remained till within the two last months. His appearance now was that of a beggar, filthy in his person, and peculiar in his mind. He said that he had had a fever in England; but no correct account of this could be obtained. She mentioned some of his peculiarities. He was solitary and silent; his only companions in his lodgings being a cat and a child, and he fed both before eating his own meal. He was very superstitious, salting his bed and head, wearing a Bible about his wrist, or round his head. He used to sit brushing away the flies with his hand for hours together, when there were no flies, and his landlady told him so. He had an almost incredible appetite for food, usually devouring half a peck of potatoes at a meal, with one or two pounds of bullock's liver, almost raw and generally filthy. After this, he would eat two or three pence worth of bread. He habitually wounded his hands, wrists and arms with needles and pins; and if he went to bed without his weapons, he rose and procured them. In this state, he would sally forth, brandishing a stick and playing extravagant tricks, till the neighbours interfered. He would suck the blood from his wrist, after every two or three mouthfuls of his food, and when asked why he ate his meat so raw, said *he liked the blood*.

He had taken a fancy to become a Quaker some weeks before the murder, and attended the meetings, but paid no respect to the worship, muttered to himself, and pricked his body with pins and needles. On one occasion, he violently demanded instant admission into the society.

Dr. Spens and Mr. Watson gave testimony in the manner stated above; but the latter added, that the prisoner had told him that there was occasionally pain and uneasy feeling in his head.

For the defence, Drs. Mackintosh, Scott and Alison, were witnesses. Some of them do not appear to have examined the prisoner; but from the testimony adduced, they agreed in opinion, that as there was every indication of previous insanity while a lodger with the witness already noticed, there was probably in this case a morbid determination to acts of violence. The insanity consisted in a *sudden morbid impulse to commit murder*. Dr. Mackintosh considered the desire to change his religious belief as a further proof, while the cunning evinced, with the subsequent denial, were asserted to be altogether consistent with insanity. The absence of motive in this instance was also dwelt on.

Howison was convicted, and an application to the Home Department, for the privilege to adduce additional proofs of his insanity, was denied. These consisted chiefly in unprovoked and boisterous acts of violence, immediately previous to the murder.

The evening before his execution he stated, that he had committed eight murders, not one of which had ever been heard of, or could have occurred without being known. His voracious appetite continued until his death.*

I will only add to these a case which has excited great interest in France, the country where it occurred.

Louis Papavoine was born at Mouy, Department of the Euse, in 1784. His father was a woollen manufacturer, and gave his son a liberal education. At an early age, he was destined for the employment of a clerk, and accordingly, in 1804, was re-

* Edinburgh Medical and Surgical Journal, vol. 38, p. 51. Medico-legal cases of Homicide, by Alexander Watson, Esq. Edinburgh Law Journal, vol. 1, p. 532. Different views of this case are taken in the respective works quoted. Mr. Watson is strongly of opinion, that the insanity of Howison at the time of the act, was not proven. He persisted in denying the murder to his death; and in all the interviews between him and the law agent and clergyman, no indications of insanity were discovered in his conduct.

ceived as an extraordinary one in the navy department. He rose gradually, through good conduct and attention to business, to the office of first clerk at the port of Brest. Although very faithful, yet he was observed to be unsociable and melancholic—much addicted to solitary walks in unfrequented places. He had no confidant—but in ordinary conversation, his ideas were correct and sensible. One of his fellow clerks deposed, that during the last year of his clerkship, Papavoine complained that an individual appeared to pursue him in his sleep, and threatened to kill him, but that when he awoke he saw no one. This condition of mind continued for ten days, after which nothing remarkable was observed.

His father died in 1823, and as his mother did not seem able to superintend the establishment, he determined to undertake it himself. He accordingly obtained his dismissal. Difficulties, however, soon occurred. The manufactory had been in the habit of furnishing clothing for the troops, and notice was received that the contract would not be renewed. The pecuniary situation of the family became in consequence very critical.

Papavoine now seemed to repent having quitted his employment, and made some fruitless attempts to recover it. Their failure seemed to aggravate the severity of his temper and the gloominess of his appearance. He one day appeared before his mother and addressed her, saying, "Mother, my father is not dead. I have the proof in this paper. They sometimes bury persons who are alive." Alarmed at this, she appears to have avoided taking her meals with him, although she continued residing under the same roof.

In this state of things, at the end of Sept. 1824, Papavoine complained of illness. A physician who was consulted, found some symptoms of fever. He prescribed an emetic with good success, and further directed exercise, and particularly an excursion. P. complied, and proceeded to Beauvais, where he had relatives and some commercial connexions. His misanthropy did not, however, desert him here; he was habitually taciturn and sad, although his conversation, when he indulged in it, was correct. The only peculiarity noticed was a question to his relative, whether his father and brother were really dead. "I have a paper here (said he) which contradicts it." He also complained of having a mortal enemy at Mouy.

The day after his arrival, (October 3,) he received an unexpected letter from his mother, stating that the Department of War had agreed to a renewal of part of the contracts, and for which he appears to have been constantly applying. As some further negotiations were necessary to complete these, he determined to proceed to Paris. He borrowed money to pay his expenses, and took with him the baggage he had brought from Mouy, writing at the same time to his mother for additional articles. Among his baggage brought from home, and taken by him to Paris, were two *common table knives*.

On the 5th of October, he alighted at a hotel in Paris, visited his mercantile correspondents, and arranged the mode of completing the necessary formalities of his contract. From this day until the 10th, he appears to have kept himself very retired—at least he was not noticed by any one. At the time last mentioned, after taking a slight repast, he directed his steps to the Forest of Vincennes.

In this place, a female was walking with her two boys, one aged five, and the other six years of age. A young woman, also walking, noticed the children, and requested permission to caress them. Papavoine at this instant passed by them, took off his hat, bowed, and proceeded on. The young woman also pursued her walk. She was encountered by P., who addressed her. "Do you know whose children you were caressing?" She replied, "We may caress children, although we do not know whose they are." He abruptly left her, and appears to have gone immediately into an adjacent shop, where he inquired for a case knife. They refused to sell any, except by the dozen; but on his offering an advance in the price, a single one was sold to him.

He returned to the walks, and with a pale countenance and haggard aspect, encountered the mother. "Your walk is soon finished," said he; and bending his body over one of the children, as if to embrace it, plunged his knife into its breast. Alarmed with its shriek, though ignorant of the cause, she struck him with an umbrella which she had in her hand. He did not heed this, but immediately struck the second in an equally fatal manner. Both died almost instantly. Papavoine escaped into the wood: nor was it until some hours had elapsed, that he was arrested by a *gendarme*. He had, a few minutes previous, emerged near where a soldier was walking, of whom, after examining his

clothes, he inquired whether they were not soiled. He also asked the way out of the forest. He was identified by the mother, and gave up his name.

On his examination, he denied having committed the crime, and persisted in this for upwards of a month; at the end of which period, he declared that he had some important disclosures to make, but could divulge them only to two royal princesses. His application to see them was refused; and he then declared that he had committed a mistake in murdering these children, having intended to destroy those of the Duke de Berri. (The Duke had been assassinated previous to this.)

This audacious statement was considered as an artifice, to persuade the public of his insanity. About this period, also, he became very furious in his prison; got out of his bed at night; searched for a knife, and even attempted to set fire to his bed. His keeper having momentarily left a door open to admit the fresh air, he escaped, and rushed into a room containing several prisoners; snatched a knife in the hands of one of them; gave him three wounds, and was only prevented from murdering him by the interference of those present. The public prosecutor saw in all this, "*a criminal who sought in new crimes a justification of previous guilt.*" He was tried on the 25th of February, 1825, on two indictments—for murder, and for an attempt to kill.

At the bar, he was calm, though his countenance bore the marks of sadness. On being interrogated, he confessed the murder, but said he was not then himself. He repelled the idea of premeditation—said that he did not know the infants at all; and urged, that if he had designed to kill, he would have carried with him the knives brought from Mouy. Labouring under insanity, he committed the act; but its execution being completed, he became conscious of its enormity, and endeavoured to escape.

It also appeared on the trial, that the father of Papavoine had been subject to attacks of mania during his lifetime, and that he was generally a morose, melancholy man.

As to the attack on the young man, the criminal stated that he was then in a state of fury, irritated by his confinement and by bad treatment. The keeper of the prison deposed that Papavoine was sometimes in a most fearful fury; his hair literally bristled—he had never seen a person's hair in such a state; his countenance was highly inflamed, and he actually frightened the sol-

diers who surrounded him. Although believing at first that this was intended as a deception, the witness had been finally constrained to consider it as real disease.

The public prosecutor, in his argument, endeavoured to show that the present was a case of ferocity—against the human race itself—a thirst for blood, which is sometimes seen, although fortunately the instances are rare. He aptly adduced examples from the history of revolutionary France.

M. Paillet, the advocate of the prisoner, dwelt much on the evidence of his previous illness, as indicative of a disordered state of mind. His misfortunes, his conversation with his mother—with his relatives at Beauvais—his hallucination concerning a person persecuting him and threatening his life, and the apparent want of premeditation in the murder, evidenced by the rapidity of his actions, all were urged in his favour; and the advocate expressed his decided conviction that this was a case of *monomania without delirium*, as described by Pinel, in which the unfortunate subject is often hurried to commit atrocious crimes, from the current of ideas by which he is unwillingly haunted. Such persons often take strong aversion, and even hatred against individuals in an instant, and without any assignable cause. Thus parents have sometimes murdered their children, and the wife her husband. Might he not then, at the moment of his several crimes, have been labouring under the access of fury incident to this disease? Let him be confined, so as to guard the public from further violence; but do not send him to the scaffold.

The jury, after retiring for half an hour, brought in a verdict of *guilty* on both indictments. He was condemned to death, and executed on the 19th of March.*

I might adduce a multitude of similar examples, differing occasionally in some peculiar features, but all turning on the point whether the insanity has been sufficiently proved at the period of the commission of the act, or whether the previous indications were sufficiently strong to afford a decided presumption of its continuance to the time in question. But my limits forbid, and I will hereafter add additional references for those who may be desirous of pursuing the subject.

As to the cases that have been related, I will observe, that

* *Causes Célèbres du dix-neuvième siècle*, vol. 1, p. 203 to 290.

they are just such as intelligent persons, (medical as well as non-medical) might differ about, on the simple point of the presence or absence of insanity. Howison's, for example, I may concede, was an extreme one, yet his is not to be a rule for subsequent decisions. In the same volume which contains the narrative of his trial, is another, of an individual guilty of the murder and robbery of his aunt, and yet, though condemned, he received the royal mercy, on a representation of his weak state of mind. It is evidently impracticable to lay down a rule of exemption on the ground of insanity, when that insanity passes through so many varying shades, (from the stupidity, for example, of Hoffbauer, to the raging mania of authors,) that before we have completed it, we shall find that we have introduced the *effects of violent passions* as a species of *temporary insanity*. The philosopher may justly deem them so, but the safety of civil society requires that they should be considered as crimes.

These remarks bring me to the last point to be considered under this section. I refer to the subject of *moral insanity* described on a previous page, and to the definition of which I must beg the reader to recur.

As announced by Dr. Prichard, it consists in a disorder of the moral affections and propensities, without any symptom of illusion or error impressed on the understanding.* He justly observes, that no such disorder has been recognised in the English courts of judicature, or is it even in general admitted by English medical writers. If however, such a disease does exist, our legislators and judges should be apprized of it.

The idea of such a state, was first advanced by Pinel, who characterized it by the name of *manie sans délire*, and observed, that persons labouring under it, appear to be governed by a sort of instinctive madness, as if the affections alone had suffered injury. Esquirol, when he wrote his valuable articles for the Dictionary of Medical Sciences, did not recognize this species, but

* Dr. Gooch, without reference, however, to the present subject, denies that delusion is always present in insanity, and in illustration mentions the case of one of his patients. She was a wife, and supposed her husband to be unfaithful to her, which was probably the case. She brooded over this and became insane. When she recovered she was still of the same opinion. These are all the facts furnished to us by Dr. Gooch. Now she certainly was not insane on the subject of her husband's infidelity. But was she not so on some other points? If not, what constituted her insanity? This case is mentioned in the Quarterly Review, vol. 41, p. 180.

he has since avowed having met with several cases in lunatic asylums, and is convinced of its distinct character.*

The dawnings of this melancholy affection, and the struggles of the understanding with it, will best be understood by the following quotations from Marc :

“In a respectable house in Germany, the mother of a family returning home one day, met a servant, against whom she had no cause of complaint, in the greatest agitation ; she begged to speak with her mistress alone, threw herself upon her knees, and intreated that she might be sent out of the house. Her mistress astonished, inquired the reason, and learned that whenever this unhappy servant undressed the little child which she nursed, she was struck with the whiteness of its skin, and experienced the most irresistible desire to tear it in pieces. She felt afraid that she could not resist the desire, and preferred to leave the house.

“This circumstance occurred about twenty years ago in the family of M. Le Baron Humboldt, and this illustrious person permitted me to add his testimony.

“A young lady whom I examined in one of the asylums of the capital, experienced a violent inclination to commit homicide, for which she could not assign any motive. She was rational on every subject, and whenever she felt the approach of this dreadful propensity, she intreated to have the straight-waistcoat put on and to be carefully guarded until the paroxysm, which sometimes lasted several days, had passed.

“A distinguished chemist and a poet, of a disposition naturally mild and sociable, committed himself a prisoner in one of the asylums of the Faubourg St. Antonie. Tormented by the desire of killing, he often prostrated himself at the foot of the altar, and implored the divine assistance to deliver him from such an atrocious propensity, and of the origin of which he could never render an account. When the patient felt that his will was likely to yield to the violence of this inclination, he hastened to the head of the establishment, and requested to have his thumbs tied together with a ribbon. This slight ligature was sufficient to calm the unhappy R. who, however, finished by endeavouring to commit homicide upon one of his friends, and perished in a violent fit of maniacal fury.”†

* Note de Monomanie homicide, par M. Le Docteur Esquirol. Paris, 1827.

† Dr. Prichard, art. Soundness and Unsoundness of Mind, in *Cyclopædia of Practical Medicine*.

Other cases of a similar description, are related by French and German writers. In some, the impulse to commit murder was only felt, while in others, as in mothers with their young infants, the desire at last became irresistible and they destroyed them. Nor is this confined to the puerperal period, when we might possibly suspect the presence of its peculiar insanity, but children of every age have been thus destroyed, both by fathers and mothers.

The following is one of the most dreadful on record, for the atrocity of the crime, and as it is generally recognized as belonging to this division, may be here stated.

Henriette Cornier, aged 27 years, a domestic servant, was of a mild and lively disposition, always full of gaiety and vivacity, and remarkably fond of children. In the month of June, 1825, a singular change occurred in her character. She became silent, melancholy, absorbed in revery, and was soon dismissed from her service. She fell gradually into a permanent stupor. Her friends were alarmed, and suspected that she was pregnant, which however was not the case, but they could never obtain from her any account of the cause of her dejection, though she was frequently interrogated. In the month of September, she made an attempt to drown herself in the Seine, but was prevented.

In the following October, her relatives procured her employment at the house of Dame Fournier; but her conduct appears to have continued as before.

Without any change from this, she, on the 4th of November, committed the following act. She was desired by Dame Fournier, who went from home in the morning, to prepare dinner, and to go to a neighbouring shop kept by Dame Belon, to buy some cheese. Henriette had frequently gone to this shop, and when there always caressed a beautiful little girl, nineteen months old, the child of Belon. On this day she went, and displayed the greatest fondness for it, and persuaded the mother, who was at first rather unwilling, to let her take it out for a walk. She immediately took the child to the house of Dame Fournier, then empty, mounted the common staircase with a large knife which she took from the kitchen, and stretching the child across her own bed, with one stroke cut off its head. This she placed by the case-ment, and then put the body on the floor near to it. All these proceedings occupied about a quarter of an hour; and during this

time, Henriette remained perfectly calm. Dame Belon presently came to seek for her child, and called her from the bottom of the stairs. "What do you want?" said the latter, advancing on the corridor. "I come to seek my child." "Your child is dead," replied Henriette with perfect coolness. The mother alarmed, became more earnest, and she again pronounced the words, "Your child is dead." As Belon forced her way into the room, Henriette took the child's head from the casement and threw it by the open window into the street. The mother rushed out of the house struck with horror. An alarm was raised; the father of the child and officers of justice with a crowd of persons entered. Henriette was found sitting on a chair near the body of the child, gazing at it, with the bloody knife by her, and her hands and clothes covered with blood. She made no attempt for a moment to deny the crime—confessed all the circumstances, even her premeditated design, and the perfidy of her caresses, which had persuaded the unhappy mother to entrust to her the child. It was found impossible to excite in her the slightest emotion of remorse or grief: to all that was said, she replied with indifference, "I intended to kill the child."

Adelon, Esquirol and Lèveillé, were appointed to visit her. After several interviews, these eminent physicians declared that they could discover no proof of insanity; yet they were not decided as to the non-existence of such disease.

Henriette was taken to the Salpêtrière. There she was repeatedly inspected by the physicians, whose last report concludes, that from February 25, to June 3, they "had discovered merely a dejection of mind, slowness in the manifestation of thought, and profound grief: secondly, that the phenomena are explained by circumstances, and therefore are no proof of derangement; and thirdly, that the opinion as to her sanity is materially affected by facts relating to her previous history. If the allegation is proved, that long previous to the committal, her habits, and her whole character, were changed: that she had become, at a particular period, dejected, gloomy, taciturn, restless, prone to revery, and had occasionally attempted suicide, it would seem that her present state is not the result of existing circumstances, since it has lasted a year before the commission of the act, in which case the opinion as to her sanity would be materially altered."

On the trial, M. Esquirol and several other physicians were

examined. Their opinions leaned generally towards the presence of real derangement. The Advocate-General treated the existence of monomania as a mere fancy, invented for the purpose of paralysing the hands of justice. The jury brought in a verdict that Henriette had committed murder voluntarily, but without premeditation, and she was condemned to perpetual imprisonment with hard labour, and to be branded. She heard the sentence without betraying the least emotion.

It is a remark of Esquirol that occasionally moral and physical causes can be assigned for this disordered state. In two cases, it resulted from the change produced by puberty; but in many others, it seems to be founded on imitation. The fatal propensities are excited by the description of criminal actions. In several cases where our author was consulted, it was evident, that females of respectable standing, who were strongly impressed by the story of Henriette's murder, and the horror excited, had been seized with a similar propensity.

The following are enumerated by Dr. Prichard, as distinguishing characters of this form of insanity, deduced from his own observations and those of Esquirol.

"1. Acts of homicide perpetrated, or attempted, by insane persons, have generally been preceded by other striking peculiarities of action, noted in the conduct of these individuals, often by a total change of character:

"2. The same individuals have been discovered, in many instances, to have attempted suicide, or to have expressed a wish for death; sometimes they have begged to be executed as criminals:

"3. These acts are without motive; they are in opposition to the known influences of all human motives. A man, known to be tenderly attached to them, murders his wife and children—a mother destroys her infant:

"4. The subsequent conduct of the unfortunate individual, is generally characteristic of his state: he seeks no escape or flight—delivers himself up to justice—acknowledges the crime laid to his charge—describes the state of mind which led to its perpetration; or he remains stupefied and overcome by a horrible consciousness of having been the agent in an atrocious deed:

"5. The murderer has generally accomplices in vice and crime; there are assignable inducements which led to its commission—

motives of self-interest, of revenge, displaying wickedness premeditated. Premeditated are, in some instances, the acts of the madman: but his premeditation is peculiar and characteristic.”*

Dr. Ray has given some additional characteristics. (a) The impulse to destroy, is powerfully excited by the sight of murderous weapons, by favourable opportunities of accomplishing the act, by contradiction, disgust, or some other equally trivial and even imaginary circumstances. (b) The victims of the homicidal maniac are mostly, either entirely unknown or indifferent to him, or they are among his most loved and cherished objects, and it is remarkable how often they are children and especially his own offspring. (c) While the greater number deplore the terrible propensity by which they are controlled, and beg to be subjected to restraint, a few diligently conceal it, or if they avow it, declare their murderous designs, and form divers schemes for putting them in execution, testifying no sentiment of remorse or grief. (d) The most of them having gratified their propensity to kill, voluntarily confess the act, and quietly give themselves up to the proper authorities; a very few only—and these to an intelligent observer, show the strongest indications of insanity,—fly and persist in denying the act.†

Under this head of *moral insanity*, besides the impulse to murder, there is also included a propensity to break and destroy whatever comes within reach of the individual; “in short, an irresistible impulse to commit injury, or do mischief of all kinds.” And this is observed in cases in which it is impossible to discover any motive influencing the mind of the person who is the subject of it. “No illusive belief, for example, can be detected, that the lunatic is performing a duty in perpetrating that which manifests his disease.”‡

Many cases of suicide are also classed under this head. In these instances, “there is generally no particular illusion impressed on the understanding of the self-destroyer, but a perversion of the strongest instinct of nature—self-preservation.” Again, the propensity of setting fire to houses or public buildings, is ranked by Dr. Prichard under this head.§ To these Orfila adds *monoma-*

* Prichard *ut antea*. † Ray’s Med. Jurisp. of Insanity, p. 230. ‡ Prichard.

§ Jonathan Martin, who set fire to York Minster, and in consequence destroyed that splendid and venerable relic of antiquity, does not belong to this class. He was undoubtedly a *monomaniac*, and stated that he was inspired by a dream to do it, so that people would go to other places to hear the gospel. See *Medico-Chirurgical Review*, vol. 15, p. 222; and Shelford on the Law of Lunatics, p. 458.

niacal robbery; although he allows, that in this case, it is rather more difficult to show the want of motive.*

The cases of Papavoine, Cornier and others, to which I will hereafter refer, have excited great interest on this subject in France, and numerous publications have been the result. In that country, Esquirol, Gall, Broussais, Orfila, Andral, Marc, Georget, Michu and many others, have avowed their belief in the various forms of homicidal insanity which I have now described; while in England, Prichard and Elliotson, and I doubt not, many others are among the supporters of the doctrine. Dr. Woodward, the able physician of the State Lunatic Asylum of Massachusetts, and Dr. Ray, have, in this country, published their coincidence with it.†

On the other hand, Regnault and Collard de Martigny, two advocates, have opposed it strongly in their writings.‡

The main scope of their argument is, that most of these cases are only the evidences of depraved passions, and while they allow that some are correctly styled maniacal, and therefore do not bring these into controversy, they assert that all countries have at various periods presented criminals whose actions in every respect resemble those of the homicidal monomaniacs of the present day. Nero and Tiberius, Robespierre and Collot D'Herbois, (say they) had as much a thirst for blood as Papavoine or Cornier. The malignant passions also concentrate on a single idea—and though the individual is under their influence, yet on points not connected with the prevailing idea, they will appear calm and intelligent.

To the argument, that the monomaniac has no motive to urge

* Leçons, vol. 2, p. 65, 2d edition. There is a curious case given in the *Annales D'Hygiène*, vol. 3, p. 198, and styled *Monomanie erotique*. The individual was in the constant habit of writing love-letters, sometimes to the highest females in rank in France; and although repeatedly confined in prisons and in asylums, he as invariably recommenced when released. He was examined by Esquirol and Marc in 1826, and they positively state that they could find no proof of mental alienation in his moral affections—no incoherence in language or reasoning, and nothing in his physical appearance. The only remarkable circumstances were his denial of having written any letters—though he had probably sent hundreds—and his deeming himself the object of persecution. They conclude by considering him subject to intermittent madness.

† Fourth and Fifth Reports of the State Lunatic Hospital at Worcester. Ray's Medical Jurisprudence of Insanity.

‡ Regnault, *Du Degré de Compétence de Médecins*, &c. and *Nouvelles Réflexions sur la Monomanie*, &c. See, also, his reply to a review of his first work, in *Annales D'Hygiène*, vol. 3, p. 231. Collard De Martigny, *Sur la Monomanie-Homicide et la Liberté Morale*.

him to crime, it is urged, that even criminal murderers do not all destroy for money. In many of the instances of supposed insanity, early debauchery, with a profound ignorance of the obligations due to God and man, marks the character. Such persons may acquire a passion for blood. The desire to kill exceeds the desire to obey the laws.

The frequency of cruelty in children, the tournaments of former times, the gladiators of Rome, the bull fights of Spain, and the fondness for witnessing executions in all civilized countries, are urged as proofs that this disposition can be extensively and permanently encouraged. Above all, they object to the act itself being deemed the material proof of the presence of insanity. Because one person murders another without any assignable motive, is the criminal by consequence to be considered a maniac?

The authors whom I have quoted on the other side, adduce a multitude of facts in favour of their position. They present the narratives of the respective cases—the termination of many of them in raging mania or dementia, and the remarkable change of character that so often occurs.

Esquirol asks, if the intellect can be perverted or abolished, why may not the will? Leuret, in his reply to Regnault, observes, that there are instinctive impulses, which deprive a man of liberty, but not of conscience. The criminal has conscience, liberty, will. The monomaniac, conscience without liberty. Thus some will withdraw themselves, when they feel the disposition for committing injury. If this reasoning be correct, can such a person be held responsible for his actions, even if he knows what he is doing?

There are, however, many others, who go far beyond these experienced observers, and seem disposed to include all crime under the category of insanity. Professor Friedreich lays down this dictum, “Plus l’acte est atroce, plus l’irresponsabilité devient probable.” A Review, in England, important as the organ of a party in political ethics, uses these words—“The public mind is awakened to the fact, that *all crimes are the result of perversions of intellect, and like other species of insanity* deserve to be treated with more of compassion than vengeance.” In Germany, the following question has been gravely discussed among its medical jurists: If monomania consists in a subjection of the intellectual faculties to one predominant idea, ought we not to regard a per-

son monomaniacal, whose mental faculties are governed by a vivid affection—a violent passion? or in other words, is the existence of monomania to be conceded, whether the reason is affected by an erroneous conviction or a *violent passion*? The answer to this is generally in the negative, yet some contend that there is a mixed diseased state of the mental faculties, a mixture of passions and insanity.*

To such doctrines and their consequences, let me interpose the remarks of the judicious Andral.

“It is only where the insanity at the time of committing the crime is quite unequivocal, that the individual should be saved from the penalty. The interests of society must be regarded, and we must act upon the minds of men by examples of severity, so as to make an impression, and restrain others by a salutary fear. I have dwelt upon this point the more, because I think that of late medical men have fallen into the error of laying too much to the charge of insanity as regards crime.”†

“There are some who hold that the mere act of a party, without any corroborating circumstances, is sufficient to indicate sanity or insanity, and to justify responsibility or the contrary. Such persons, we presume, would have pronounced this prisoner insane, and therefore irresponsible, since her act was committed without motive, and against all the common feelings of humanity. We cannot hold with this doctrine. It is true, that crime is rarely committed by a sane person without motive, but there are numerous cases, in which we are unable to trace the motive, and were we, on the principle assigned, to allow of irresponsibility on these occasions, we should be assuredly overthrowing one of the great barriers established for the protection of society.”‡

In a previous edition, I quoted the following remarks of Marc on this subject, and they are too important to be now omitted.

“There is no species of madness, which so much deserves the attention of the physician and the jurist, as *mania without delirium*. It has brought to the scaffold many deplorable victims, who merited compassion rather than punishment. Unfortunately,

* Friedreich in *Annales D'Hygiène*, vol. 14, p. 460. Westminster Review, vol. 23, p. 222. Amer. Edit. Taufflieb in *Annales D'Hygiène*, vol. 14, p. 187. To illustrate the far-spread speculations of the Germans on this subject, I may add, that Professor Heinroth insists that moral depravity is the essential cause of insanity. With him, guilt and sin are its real sources.

† Lectures, London Med. Gazette, vol. 18, p. 811.

‡ British and Foreign Med. Review, vol. 3, p. 535.

I perceive no other means of ascertaining this wretched state, in which an instinct, at the same time destructive and irresistible, hurries on its victim to the commission of crimes the most abhorrent to nature, except a confinement indefinitely prolonged, during which he should be observed at those moments when he is excited by his dreadful propensity. Then, if it be real, an extreme agitation will be perceived, with flushings of the face, eyes sparkling, and perhaps, also, as in cases of propensity to suicide, the most highly wrought state of hypochondriac excitement. Women are in general more subject to this species of mania than men, especially at the periods of menstruation, (and particularly when in a morbid state,) or during gestation. These different situations, then, require great consideration. *Moreover, the moral circumstances which precede or accompany crimes, generally show whether they are the result of criminal intentions or derangement of intellect; that is to say, that in a real criminal, there is always some motive of personal interest, by which the moral cause of his act may be known.* Thus, a homicide followed by robbery, cannot be attributed to *mania without delirium*.”*

As a conclusion to this subject, I will state two cases that have lately occurred in this country. Their resemblance to several of the narratives that I have already given, will be readily recognised.

Abraham Prescott, of Pembroke, New-Hampshire, was recently tried for the murder of Mrs. Sally Cochran. He was eighteen years of age, and had resided for several years in the family of the deceased. On the 6th of January, 1833, he made an attempt on the lives of Cochran and his wife, at midnight, and while they were asleep; but the blows which he gave with an axe were fortunately not fatal. The case was considered one of destructive somnambulism, as there was no previous malice exhibited. On the 23d of June, 1833, he accompanied Mrs. Cochran to a field, for the purpose of gathering strawberries. He came upon her unawares, and murdered her, by beating her head with a stake, after which he dragged the body about two rods from the scene of violence, where it was concealed in brushwood. Very soon afterwards, the husband ascertained from Prescott himself, on asking where his wife was, what he had

* *Marc ut antea*, vol. 2, p. 68.

done. "I ordered him," says Mr. Cochran, "to run and show me where she was. He was loth to go, but finally started, and on the way stated that he had the toothache, sat down by a stump, fell asleep, and that was the last he knew, until he found that he had killed Sally."

Soon after being arrested, in conversation with the coroner, the prisoner confessed the crime with which he was charged, and that officer further stated the language held by him. "He and the deceased went out into James Cochran's pasture together, from thence down into the brook field; that when about to return home he made her a proposal, which she indignantly repelled—calling him a rascal, &c., and said she would tell her husband, and he would be punished. The prisoner then sat down on a stump—considered his situation—thought he must go to jail for his offence, and had as lief die as go there. Saw a stake near him, caught it up and killed her."

The prisoner on his indictment pleaded not guilty, and his counsel set up the defence of insanity.

He was described as a moody, odd sort of person. It was also proved that there was a hereditary predisposition to insanity in the family on the paternal side, exhibited in the grandfather and one or two of his brothers, the grand uncles of the prisoner.

His parents testified, that when an infant, six weeks old, his head began to enlarge, and at three years, was as large as his father's. He suffered with sores in his infancy, and was very much addicted to sleep walking.

Drs. Wyman and Parkman (the perusal of whose testimony I particularly recommend,) gave the result of their extensive experience on the subject of hereditary insanity, illustrating its great frequency, and the predisposition to its occurrence that thus existed. Dr. Wyman has been sixteen years physician of the McLean Asylum for the insane in Charlestown, (Massachusetts) and I was hence struck with one of his answers. "Insanity is sometimes manifested by a sudden disposition to violence, and sometimes to great violence, but I do not remember that I have seen any case where the first symptom was a disposition to kill."

Dr. Cutter, who had for a number of years kept a private asylum, corroborated the opinion of the other medical witnesses. Hereditary insanity may manifest itself, he observed, without any known cause. It is often sudden and intermittent, and is some-

times accompanied by an irresistible disposition to commit violence.

The jury found the prisoner guilty.*

The other case was that of Major Mitchell, tried before the supreme judicial court of the state of Maine in November, 1834, for assaulting and maiming a boy aged eight years, and named David F. Crawford.

Mitchell was eleven years of age. It appears that he induced Crawford, by threats, to go with him and gather some flags. In a very short time, he began to whip the boy. A neighbour heard the crying and took the prisoner off, and sent Crawford home. Mitchell, however, intercepted him, and, after various threats, carried him into the woods, threw him into the bushes, then carried him to a pond and thrust him in, took off his clothes, tied his hands, and then whipped him severely with withes. Finally, he took a piece of sharp tin and cut out one of his testicles. His cruelty did not cease even with this, as he afterwards continued to beat him.

On the trial, the counsel for the defendant stated that he would prove that the prisoner, in early infancy, had received a dangerous hurt on the top of his head, and that a striking malformation of that part was now present; but owing to the absence of the parents of Mitchell, a part of this was not corroborated. Dr. Mighels of Portland, however, deposed that there was an unusual appearance in the construction of the head—a palpable depression on the cranium, and the right ear was lower than the left.

Mr. Bailey, at whose school Mitchell had attended for about two months, swore that he could read in spelling lessons, but not in reading lessons. He did not learn so fast as others did, but made improvement. "He was more sly than other boys; he would watch me narrowly, and was mischievous when I turned my back. Punishment influenced his conduct. I do not consider him so bright as others, but far from being a fool." He had been punished for quarrelling.

The jury found the prisoner guilty, and he was sentenced to nine years' hard labour in the state prison.

* I am indebted for the facts in this case, to the Boston Medical and Surgical Journal, vol. 11, p. 361. On referring to the account of the trial, with which I was favoured by Dr. L. V. Bell, I find the above abstract to be entirely correct.

The reporter of this case (Mr. Otis) observes, that many are of opinion "that utter fatuity in this convict is inferable, first, from the very circumstances of the case, as made out upon the trial; next, by the manner and terms of the boy's conversation in reference to the revolting subject of his crime; and lastly, by his present appearance, his past history, and peculiar physical conformation."*

* Report of the trial of Major Mitchell, etc. by James F. Otis, Attorney at Law Portland, 1834. Also Boston Medical and Surgical Journal, vol. 11, p. 404.

I will in this place add references to additional cases; but I must premise, that while some are clearly referable to Dr. Prichard's *moral insanity*, others are at least verging to *monomania*; and the reason probably of this is, that on the continent, they have universally received the general appellation of *homicidal monomania*, *suicidal monomania*, *infanticidal monomania*, &c. &c. And this is probably in deference to Esquirol, who, in his *Note sur la monomanie-homicide*, p. 4, makes a division of this form of disease. Some of these insane murderers, according to him, are prompted to the act by a delusion—by false reasoning—by a delirium; others again exhibit no appreciable alteration of the intellect or affections; they are impelled by a blind instinct—an idea which forces them to acts of violence. Now the first class is undoubtedly monomania, and should not be connected with the others. Dr. Prichard very justly condemns the union, since the very term monomania implies a *partial illusion*, the absence of which is the essence of his *moral insanity*. When, however, we proceed to analyze the cases, some difficulty will be experienced in classifying them. I content myself with indicating such as are worthy of examination.

Many are contained in the three pamphlets of Georget—*Examen Médico-légale*, *Discussion Médico-légale*, and *Nouvelle Discussion Médico-légale*; Esquirol and Michu on *Monomanie-Homicide*. (See Catalogue of Books consulted.)

Orfila's *Leçons*, vol. 2, p. 52 to 66. 2d edition.

Annales D'Hygiène, vol. 1, p. 126. Three cases at Charenton, selected by Esquirol.—Vol. 2, p. 392. A murderer of his wife, examined by Esquirol and Ferrus.—Vol. 3, p. 413. Case by Professor Grossi of Munich, a man seventy years old, who killed his two children and shot his servant. He was confined, and died within the year, of dementia.—Vol. 7, p. 173. Criminal propensities of a child aged eight years.—Vol. 8, p. 397. An extraordinary case of child-murder, by Dr. Reisseissen, with observations by Marc.—Vol. 9, p. 431, 438. Homicidal monomania.—Vol. 11, p. 242; vol. 12, p. 127. Ibid. p. 94. Arson by an uneducated girl, who was passionate and deemed a fool.—Vol. 13, p. 220. Case of Nonnent, a raving madman, Vol. 14, p. 151. Taufflieb on the present state of medico-legal doctrines on Insanity in Germany. Ibid. p. 389, 426;—vol. 15, p. 128. A young man, murderer of his brother, sister and mother. There was hereditary insanity in the family, and he had been of a moody disposition from childhood upwards. This is a very interesting case, showing how a desire of eclat enters into the mind of the maniac.—Vol. 16, p. 121. On Homicidal monomania, by M. Cazauvieilh,—vol. 17, p. 374. A pregnant female murdering two of her children, at various times, by blows and other severe treatment. This is the history of a passionate woman, and the only extenuating circumstance I can find, is that several of her relatives had become insane. The decision of the medical examiners was as follows: "Declarons qu'il est possible que la femme R. ait agi par suite de quelque affection ayant troublé momentanément, l'exercice de ses facultés mentales." She was condemned to six months' imprisonment.—Vol. 18, p. 219, 374.

American Jurist, vol. 14, p. 253; vol. 15, p. 82; vol. 16, p. 43, 315, 341. Essays principally by Dr. Ray.

Trial of Sir Alexander G. Kinloch, for the murder of his brother, at Edinburgh, in 1795, in *State Trials*; and Gordon Smith on *Medical Evidence*, p. 334.

Edinburgh Medical and Surgical Journal, vol. 12, p. 380. A man in perfect health, awoke insane out of sleep, and attempted to kill his wife. He recovered by an

IV. *Of inferior degrees of diseased mind.*

There are several forms of disease, which either in a partial or temporary manner, bear a strong resemblance to insanity. The diagnostic appearances of such deserve a brief notice, accompanied with a consideration of the question, how far the mental alienation may be presumed to extend in each.

The *delirium* of fever is one of the most striking, and in its general characters usually resembles mania. It is, however, distinguished by its antecedent or accompanying disease—the sensibility of the sight and hearing—turgescence and redness of the eye—tremor of the tongue—gnashing of the teeth, and heat of the skin. These peculiarly characterize the alienation accompanying synocha and its consequences. “In delirium all the powers of the mind are implicated, and besides remain unconnected until it ceases.”* The mind is literally a chaos, and is occupied in succession by numerous phantasies. There is no one predominant idea.

The shortness of its term, its evident connexion and depen-

emetic, in a few hours, and has never been insane since.—*Ibid.* vol. 38, p. 49. Case of Stirrat, convicted at Glasgow of the *robbery* and murder of his aunt, but reprieved on the ground of weakness of mind.

Ibid. vol. 48, p. 443. Case by Marc, of Augusta Strohm of Dresden, who was incited to murder, by seeing several persons executed. (From the Memoirs of the Royal Academy of Medicine.)

Medico-Chirurgical Review, vol. 10, p. 226. Cases of homicidal mania, etc. in Paris, by Barbier, Esquirol, Marc, &c.—Vol. 10, p. 482. Do. including the cases of Cornier, Schmitt a parricide, Tristel and several others.—Vol. 13, p. 244. Homicidal and infanticidal mania; cases by Professor Outrepoint of Wurtzburg.—Vol. 13, p. 441. Cases of infanticidal monomania at Copenhagen, by Dr. Otto.—Vol. 14, p. 474. Similar case by Dr. Hawkins of London.

New York Medical & Physical Journal, vol. 3, p. 250. Case of Kirby, who drowned two of his children.

London Medical Repository, vol. 26, p. 454.

Lancet, N. S. vol. 8, p. 135. Case by Dr. Elliotson.—Vol. 11, p. 577. Andral's Lecture on Murder-Madness.

London Medical Gazette, vol. 12, p. 80. A girl, aged sixteen years, set fire to her master's house, without any apparent motive. Her previous character was good, but she had always been reserved and taciturn. She had never menstruated. In January, 1832, she was in the Chichester Infirmary, labouring under measles and low fever. Her trial came on at the Lewes assizes, in March 1833. Dr. King and other medical gentlemen, though they had not seen her, gave it as their opinion, that severe illness might have caused imbecility of mind.

Probably I may add to these the case of Gilbert, tried in New York some years since for murdering his wife. He had injured his head at a considerable time previous, and was deemed insane by several of his neighbours. His wife deserted him. He went to New York, and finding her in an equivocal situation in a bawdy-house, stabbed her with a knife.

* Halford's Essays, p. 122. The return to a sane mind just before death, which occasionally occurs in Brain Fever, is admirably described at p. 88.

dence as a symptom, on an obvious bodily disease, and the almost total abolition of the mental faculties, are decided diagnostics.*

The unconsciousness that accompanies the low delirium of typhus, shows how profound is the disorder that weighs on the mind.

In the former case, suicide and murder are often committed while labouring under it; and in both, the actions must be estimated like those of the maniac. There is, however, another species of delirium, independent of fever, at least of its most striking characters, which deserves notice. It is consistent with a knowledge of surrounding objects, but the mind rapidly returns to its flights of romance or wildness. It has sometimes been termed *light-headedness*, and is admirably pictured in Massinger's play, "A Very Woman." At intervals, there will be a temporary return to sanity. It is evidently connected with, and unless checked, must end in disease of the brain or its membranes.

Hypochondriasis, on the other hand, has many points of similitude to melancholy. Those who are affected with it, are usually of a lax fibre, and engaged in sedentary occupations. There is a languor and want of resolution that accompanies all their undertakings, and a cast of sadness and timidity generally marks the countenance. As to all future events, says Cullen in his graphic sketch of this disease, there is a constant apprehension of the worst or most unhappy state of them, and therefore there is often, upon slight grounds, an apprehension of great evil. "*Such persons are particularly attentive to the state of their own health—to every the smallest change of feeling in their bodies.*" He also remarks, that hypochondriasis is always accompanied with dyspeptic symptoms, and in elucidation of the diagnosis between it and melancholy, presents the following observations: "When an anxious fear and despondency arise from a mistaken judgment with respect to other circumstances than those of health, and more especially when the person is at the same time without any dyspeptic symptoms, every one will readily allow this to be a disease widely different from both dyspepsia and hypochondriasis." "As an exquisitely melancholic temperament may induce a torpor and slowness in the action of the stomach, so it generally produces some dyspeptic symptoms; and from thence there may

* *Georget De La Folie*, p. 237.

be some difficulty in distinguishing such a case from hypochondriasis. But I would maintain, however, that when the characters of the temperament are strongly marked, and more particularly when the false imagination turns upon other subjects than that of health, or when, though relative to the person's own body, it is of a groundless and absurd kind; then, notwithstanding the appearance of some dyspeptic symptoms, the case is still to be considered as that of a melancholy, rather than a hypochondriasis."*

Foderé mentions the following circumstances, as distinctive of these diseases. The habit of body—the illusion, as illustrated in the above quotation from Cullen, one being relative to physical subjects, and the other to moral ones—the species of fear; that of the melancholic being reserved and prudent, and not destructive of his courage—while that of the hypochondriac renders him credulous, variable and timid. He is in every respect selfish, while the melancholic, although labouring under the pressure of his disease, often retains noble sentiments.†

The hypochondriac, says Andral, becomes *conscious of various acts of his physiological life*, of which he is not ordinarily sensible. But these acts are not deranged. It is only the perception of them that is exaggerated.‡

Dr. Burrows takes a capital distinction, which may greatly aid the examiner in discriminating. "The maniac is too furious and irritable to describe any complaint; the melancholic is generally disinclined to do so, but the hypochondriac's chief solace is in a detail of all his feelings and pains, real and imaginary."

It rarely, he adds, does mischief to let the insane know you are fully apprised of the nature of their malady. But beware of giving a hypochondriac reason to think his mind is deranged; it is the surest way to make it so.§

Hypochondriacs often talk of, and sometimes attempt suicide, but rarely have courage enough to complete it.|| They are generally aware of the nature of criminal acts, and should be judged accordingly. But it must be remembered that this disease, as well as hysteria, when of long standing, or severe, often degenerate into insanity, and indeed are sometimes its first degree.¶

* Cullen, quoted by Smith, p. 423, 424.

† Foderé, vol. 1, 232.

‡ Lancet, N. S. vol. 11, p. 550. § Burrow's Commentaries, p. 480. || Parkman.

¶ "When a hypochondriac fancies his legs are made of glass, or his head is larger

Hallucination. “An idea reproduced by the memory, associated and embodied by the imagination.”* This state of mind is styled, *illusion or waking dreams* by Dr. Rush, and it is strikingly illustrated in the remarkable story of Nicolai, of Berlin, who for a length of time was visited at his bedside by individual forms, that were visible to his sight, and addressed him. During all this period, however, he was conscious that it was a delusion.† Had he believed in the existence of these phantoms, says Haslam, and acted from a conviction of their reality, he ought to have been deemed insane. A more familiar illustration is given by Collinson, and I presume there are many of my readers, who at one time or another, have experienced a somewhat similar state of mind. “Ben Jonson, the celebrated dramatist, told a friend of his, that he had spent many a night in looking at his great toe, about which he had seen Turks and Tartars, Romans and Carthaginians, fight in his imagination.”‡ If this had become permanent in his mind, he would have been deemed insane.

I can hardly imagine that this form of diseased mind can ever become a subject of legal investigation; but it may be remarked, that many maniacs have hallucinations, resembling those we have noticed. They are sometimes transient and confused, and at other times, will grow permanent and fixed.§

Epilepsy. I mention this, because it is a disease that, when long continued or violent, is very apt to end in dementia. It gradually destroys the memory and impairs the intellect. Lord Eldon, indeed, expressly recognises this disease as one of the causes of “*unsound mind.*” “Epileptic fits,” says he, “for instance, may produce a mind in the same state, at a much earlier period.”||

Epilepsy may, indeed, be attendant on every form of insanity. Of 289 epileptics at Salpetriere in 1815, 80 were maniacal, and 56 imbecile or in a state of dementia.¶ “Of all the modifications of mental derangement, there is none so terrible as that complicated with epilepsy. Maniacal epilepsy is usually characterised

than his body, or if he labours under any similar erroneous belief, he is insane.’ Prichard.—Hypochondriasis, says Sir Henry Hallford, is not accompanied by delusions, though its nervous fears are sometimes as gratuitous and ill-founded.

* Parkman.

† The narrative by Nicolai himself, is given in Haslam’s *Medical Jurisprudence of Insanity*, p. 303.

‡ Collinson on Lunacy, vol. 1, p. 34.

§ On the subject of apparitions, or *spectral illusions*, see Hibbert, Alderson and Ferriar’s *Essays*. Bostock’s *Physiology*, v. 3, p. 91, 161. *Edinburgh Journal of Science*, vol. 2.

|| Ridgway v. Darwin, 8 Vesey’s Reports, p. 87.

¶ Devergie, vol. 2, p. 958.

by the most ferocious, malign and murderous paroxysms, and often it is as instantaneous as it is violent. The effects are sometimes directed against themselves, oftener against others, and not unfrequently to the immolating of all whom they most love when sane.”*

Thomas Bowler was tried at the Old Bailey, in 1812, for wounding one Burrows with a blunderbuss, under circumstances that indicated considerable ill-will against the prosecutor, as well as design in the execution of his purpose.

The defence set up was insanity, occasioned by epilepsy. It was proved by his housekeeper, that he was taken with a violent epileptic fit in July, 1811, and that from that period she had perceived a great alteration in his conduct and demeanour. He would frequently dine at nine A. M., eat his meat almost raw, and lie on the ground exposed to rain. His spirits were so dejected, that it was necessary to watch him, lest he should destroy himself.

A commission of lunacy was also produced, showing that the prisoner had been found to be insane, since the 30th of March last.

Sir Simon Le Blanc, before whom the trial took place, charged the jury, that it was for them to determine whether the prisoner had the power of distinguishing right from wrong, or whether he was under the influence of any illusion, with respect to the prosecutor. A verdict of guilty was returned.†

After these remarks, I need hardly urge the necessity of watching the effects of this disease on the mind from time to time.

Nostalgia. This is a form of melancholy, originating in despair, from being separated from one's native country. I have already noticed its leading characteristics,‡ and will only add, that suicide is sometimes a consequence. Individuals labouring under it seldom, if ever, commit violence on others.

Intoxication. Delirium Tremens. It is a well-known and salutary maxim of our laws, that crimes committed under the influence of intoxication, do not excuse the perpetrator from punishment. The temporary alienation has been voluntarily induced, and the individual is the more inexcusable, if by previous experi-

* Burrows, p. 155.

† Starkie on Evidence, vol. 3, p. 1704.†

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ence he has learnt, that his angry passions are inflamed through its means.*

In *Ridgway v. Darwin*, Lord Eldon cites a case, where a commission of lunacy was supported against a person, who when sober, was a very sensible man, but being in a constant state of intoxication, he was incapable of managing his property.†

In the state of New York, we have a statute which places the property of habitual drunkards under the care of the Chancellor, in the same manner as that of lunatics. The overseers of the poor in each town, may, when they discover any person to be an habitual drunkard, apply to the Chancellor for the exercise of his power and jurisdiction. And in certain cases, when the person considers himself aggrieved, it may be investigated by six freeholders, whether he is actually what he is described to be, and their declaration is *prima facie* evidence of the fact.‡ The Chancellor also in a recent case decided that the court has the custody and control of the *person*, as well as of the estate of an habitual drunkard, and can exercise that control by means of a committee, as in the case of a lunatic.§

The Scotch Law is thus explained by Mr. Alison. Drunkenness is no excuse for crimes: "But, on the other hand, if either the insanity has supervened from drinking, without the pannel's having been aware that such an indulgence in his case leads to

* "To admit drunkenness as a defence, or even to allow it publicly as a mitigation, seems extremely dangerous. But as the example of punishment does not influence a man who is drunk, any more than one who is mad, it is plain that to hang a man for what he does in such circumstances, is to make drunkenness, when followed by an accidental consequence, a capital offence. This execution will not deter drunkards from murder, it only deters men who are sober from drunkenness." *Sir James Mackintosh*, (Life by his son, vol. 2, p. 27, Amer. edit.) This is strongly put, but if conceded, may not the same defence be made in most cases of murder, committed not merely during the heat of passion, but after continued deliberation. Is it not a legitimate deduction from this reasoning to assert, that to hang a man under such circumstances, is to make *violent passions, when followed by an accidental consequence, a capital offence?*

† Collinson on Lunacy, vol. 1, p. 71. Dr. Drake, some time since, made a suggestion, which if acted upon, would doubtless subserve the ends of justice and morality. A habitually intemperate man is enfeebled in his mental powers. When summoned as a witness, should his testimony have full weight? Without questioning his *competency*, should not his *capability* be called in question? (*Western Journal of Medical and Physical Sciences*, vol. 1, p. 81.)

‡ Act, passed March 16, 1821. There are other provisions in this, (which, however, it is not necessary to quote here,) relating to the local powers of overseers in such cases. (Revised Statutes, vol. 2, p. 52.) A similar law was passed in Pennsylvania, in February, 1819. (See *Commonwealth v. Cox*, in *Ashmead's Pennsylvania Reports*, vol. 1, p. 71.) And also in New Hampshire, in 1822. (*Digest of the Laws of New Hampshire*, 1830, p. 340.)

§ 5 *Paige's Chancery Reports*, p. 120. In the matter of *Ann Lynch*.

such a consequence ; or if it has arisen from the combination of drinking with a half crazy or infirm state of mind, or a previous wound or illness which rendered spirits fatal to his intellect, to a degree unusual in other men, or which could not have been anticipated, it seems inhuman to visit him with the extreme punishment which was suitable in the other case. In such a case, the proper course is to convict ; but, in consideration of the degree of infirmity proved, recommend to the royal mercy.”*

We have, until now, been only noticing the actual state of intoxication, and the disabilities consequent thereon. It is to be recollected, that long continued habits are apt to produce actual insanity, and that drunkenness is in fact one of its common causes. The conduct of individuals of this description should therefore be particularly noticed during the intervals of temperance, if any such exist. If spirituous liquors exercise such an influence as to render us doubtful concerning the state of mind at this time, we may reasonably infer that the alienation is becoming permanent.

There is, however, in addition to all this, a well marked and distinct disease, induced from the intemperate use of spirituous liquors, or certain other diffusible stimuli, but which has only attracted attention within the present century. It is styled *delirium tremens*, or *mania à potu*, and has some peculiar and striking characters. Among these I may enumerate tremors of the hands, a weak and compressible pulse, cold and clammy extremities, and frequently long continued sleeplessness. The mind is incessantly agitated on some one or other subject, often fanciful, and as the hallucination increases, apparitions, or unreal animals, are often seen by the sufferer, or persons are supposed to be present, or are heard in adjoining rooms, who are actually absent. Timidity and suspicion are common occurrences, but fortunately malignity of feeling is but seldom manifested. Though any attempt at restraint is violently resisted, yet when once overcome, there is but little of ill nature shown, and the patient, if properly managed, soon becomes tractable.† There are, however, ex-

* Principles of the Criminal Law of Scotland, p. 654.

“ By the Roman Law, a notorious spendthrift was put under guardianship ; and by the law of Scotland, a man who from drunkenness, facility of temper, or any other cause, is liable to be stripped of his property by the necessitous or designing, has the power of putting *himself* under trustees, without whose sanction no act of his can be valid. This is technically termed, *inhibiting one's self*.” DUNLOP.

† In the above sketch I have only stated the leading features of the disease. For

ceptions; and it is precisely these exceptions which render the subject worthy of consideration in legal medicine. Dr. Carter (and the experience of other physicians corroborates the assertion) states, that a medical friend of his nearly lost his life by the violence of a person labouring under delirium tremens.*

One circumstance connected with the history of this disease I have omitted until now, for the purpose of placing it singly before the reader, and thus pointing out a most important diagnostic. It is, that although the habitual and excessive indulgence in strong liquors or other diffusible stimuli, is the predisposing cause, yet the privation of them is the exciting one. Individuals are seldom, if ever, seized until after several hours or sometimes days of abstinence. Insanity or delirium, on the other hand, may follow immediately in the train of a debauch.

The first case which particularly attracted attention in this country, was brought before the medical public by Dr. Daniel Drake, of Cincinnati, (Ohio.)

John Birdsall, of the village of Harrison in that State, was indicted, in 1829, for the murder of his wife with an axe, by dividing the spinal column in the neck.

He was about fifty years old, and had been married to this his second wife, nineteen or twenty years, and had children by her. For some years previous, he had been subject to occasional fits of intoxication. These of late were followed by delirium tremens, which generally lasted several days, and went off spontaneously. In these paroxysms, all its physical and moral symptoms were present. He entertained great fears of his safety, and sometimes ran about the village, as if attempting to escape from pursuit. At another time, he concealed himself between the feather and straw bed in his own house. He would point his gun from his window, as if for defence against imaginary persons. He was also very watchful. The prevailing maniacal delusion was, that his wife was in combination with his neighbours (one his son by his first wife) against his life. He had charged her during his paroxysms, with criminal intimacy with these, and had threatened to kill her.

On Sunday he was intoxicated; Monday, Tuesday and Wed-

more extended information, I refer to the writings of Armstrong, Sutton, Carter, Coates, Cross, &c.

* Cyclopaedia of Practical Medicine, art. *delirium tremens*.

nesday presented nothing special. On Wednesday evening he complained of being unwell, but seemed to be rational. He slept none that night, and next day the family thought him crazy, but were not alarmed. In the course of it, he took an axe and went to a neighbour, whom he desired to return with him, as he stated they wanted to kill him. He spent the day at home, apparently in terror and agitation; manifested jealousy of his wife; barred the doors, and fancied that the persons of whom he was jealous, were manufacturing ropes up stairs to hang him.

In the course of the afternoon, he suddenly committed the murder in the mode already described. His wife was sitting by the fire, and he had been walking the room. After the fatal blow on the neck, he followed it with two or three on the face. His eldest daughter seized the axe, which he yielded, and took a scythe and attempted to strike her. She defended herself until the door was opened. When arrested, he acknowledged the homicide, and knew (he said) that he would be hung, but ought to have done it sooner. He talked at this time so rationally, that many of the witnesses could not believe him deranged. He evinced no dread of punishment, but was still in great apprehension of those who, he had believed, intended to kill him. After being committed, he became regular, and expressed sorrow for what he had done.

On the trial, three medical witnesses agreed that he laboured under *mania à potu*, when he committed the homicide. For the defence, it was urged that when drunkenness gives rise to insanity, it should cause immunity, and hence form a legal excuse. On the other hand, the counsel for the people remarked, that Birdsall knew that this delirium followed his intoxication, and hence it was voluntary. The law, therefore, held him accountable for actions during such a state. The verdict was murder in the first degree, and he was sentenced to death.

The case excited the interest of Dr. Drake; and in a very able paper, he clearly showed that insanity was present in this individual. Some of his observations I shall here condense.

He remarks that the paroxysms of delirium tremens are never permanent, but always transient, or for two or three days only, and seldom extending beyond a fortnight. That in this state there is actual delusion, as much so as in common insanity. That of Birdsall, was jealousy and apprehension of his wife.

The court and jury seemed to hold that he was not deranged in the degree that destroyed his perception of right or wrong, in reference to the murder; and that even if he had been, still he could not have been acquitted, because his alienation originated in intemperance. Dr. Drake, on the other hand, justly supposes that he was not capable of judging between right and wrong, or at least of controlling his actions, on the subject of his hallucination. In all his maniacal attacks, he entertained jealousy of his wife, and the idea that she was in a conspiracy against him. Here were *assumed and unreal premises; deductions true to the principles of logic, but false in point of fact; and lastly, acts consistent with his conclusions*—constituting in fact the very essence of insanity. Had he killed, in a real dispute, any one not in the conspiracy, it would have been foreign to his hallucination, and should not have been excused.

As to the remaining part of the opinion of the court, viz. that the prisoner was aware that *mania à potu* followed his intoxication, and therefore he could not be excused from his voluntary state of insanity, Dr. Drake remarks, that the disease equally arises sometimes from opium, and even from liquors not taken to intoxication. In the eye of the law, even drinking to excess is not criminal; nor did the prisoner take liquor with malice pre-pense.

From these considerations, Dr. Drake is disposed to doubt the justice of the sentence of McDonough, for the murder of his wife.*

In consequence of a petition from many of the inhabitants of

* This was a case which I mentioned in the former edition, as follows:

"William McDonough was indicted and tried for the murder of his wife, before the Supreme Court of the State of Massachusetts, in November, 1817. It appeared in testimony, that several years previous, he had received a severe injury of the head; and that although relieved of this, yet its effects were such as occasionally to render himself insane. At these periods, he complained greatly of his head. The use of spirituous liquors immediately induced a return of the paroxysm; and in one of them, thus induced, he murdered his wife. He was, with great propriety, found guilty. The *voluntary* use of a stimulus which he was well aware would disorder his mind, fully placed him under the purview of the law."

After reviewing this case, I am aware that I have probably expressed myself too strongly—in a *medical* point of view; and the reason of this is aptly suggested by Dr. Drake, when he asks whether, if McDonough had killed his wife in one of his ordinary paroxysms, he would have been condemned? The case, however, is not one of delirium tremens, as the murder was committed during the fit of intoxication, and it thus rendered him obnoxious to the usual *legal* enactments.

Dr. Ray (Med. Jurisp. of Insanity, p. 447) does me injustice, in quoting a portion only of this paragraph.

the State, who became convinced of his insanity, the punishment of Birdsall was commuted by the governor to that of imprisonment. During the period that elapsed between his sentence and this commutation, he again became insane in prison. Although on the trial he had confessed the murder of his wife, and urged that he had been insane when committing it, yet now he denied it positively, and said she was alive. He told Dr. Drake that she had not only spoken to him through the walls of the jail, but had actually visited his apartment several times. On the day previous to his appointed execution, while he knew nothing of the change of punishment, he was urged to sign a petition for pardon to the governor, in which there was an admission that he had killed his wife, but that he must have been insane when he did it. He refused it obstinately, and with violence; although he wished to live, he would not consent to introduce this.

Birdsall did not use tobacco, yet during this period he spat profusely. His pulse, when unexcited, was from 86 to 94 beats in a minute. Dr. Drake supposes, with great probability, that the low diet, darkness and solitude of his prison, may have reproduced and fixed the state of insanity, and which was continued for nearly a year after the latest period that I have seen a notice of him.*

Another case, earlier in date, but published about the same time, was tried at Boston, in May, 1828.

Alexander Drew, commander of the whaling ship John Jay, was indicted before the United States Circuit Court, for the murder of his second mate, Clarke, while on the high seas. It appeared in evidence, that he had sustained a fair character, and was much respected in the place where he resided. He was proved to be a man of humane and benevolent disposition, but that for several months, he had been addicted to the use of ardent spirits; and for weeks during the voyage, had drunk to excess. In August, 1827, they spoke a vessel, from which Capt. Drew obtained a keg of liquor. He drank until he became stupified; but when he recovered, he ordered the keg and its contents to be thrown overboard. There was now no more liquor on board of the ship.

In two or three days, Capt. Drew discovered signs of derangement. He could not sleep; had no appetite; thought the crew

* Western Journal of the Medical and Physical Sciences, vol. 3, p. 44, 215, 598.

had conspired to kill him; was unwilling to be alone; expressed great fears of an Indian who belonged to the ship; called him by name when he was not present; begged he would not kill him, saying to himself he would not drink any more rum. He would sing obscene songs, and then hymns, and alternately pray and swear. He made an attempt to throw himself overboard, but was prevented. The next morning, he, with Clarke and the first mate, were at breakfast, when he suddenly withdrew from the table, and appeared to conceal something under his jacket, which lay in another part of the cabin. He immediately turned to Mr. Clarke, and requested him to go on deck. "When I have done my breakfast, sir," was the answer. Drew said, "Go upon deck, or I will help you;" and instantly took up the knife which had been covered by his jacket, and stabbed Clarke in the right side of the breast. As one of the witnesses was passing out of the cabin, Drew snapped a pistol at him, but it missed fire. He was secured and bound, but remained for some weeks in this state. When he recovered, and was told of the murder, he replied that he knew nothing of it—all that he was conscious of, was, that when he awoke, he found himself handcuffed. It did not appear that there had been any quarrel between Drew and Clarke for months previous.

Judge Story arrested the cause at this stage. "We are of opinion," said he, "that the indictment, upon these admitted facts, cannot be maintained. The prisoner was unquestionably insane at the time of committing the offence. And the question made at the bar is, whether insanity, whose remote cause is habitual drunkenness, is or is not, an excuse in a court of law for a homicide committed by the party, while so insane, but not at the time intoxicated, or under the influence of liquor. We are clearly of opinion, that insanity is a competent excuse in such a case. In general, insanity is an excuse for the commission of every crime, because the party has not the possession of that reason, which includes responsibility. An exception is when the crime is committed by a party, while in a fit of intoxication, the law not permitting a man to avail himself of the excuse of his own gross vice and misconduct to shelter himself from the legal consequences of such crime. But the crime must take place and be the *immediate* result of the fit of intoxication and *while it lasts*, and not as in this case, a remote consequence, superinduced by the antecedent exhaustion of the party, arising from gross and habitual drunken-

ness. However criminal in a moral point of view such an indulgence is, and however justly a party may be responsible for his acts arising from it, to Almighty God, human tribunals are generally restricted from punishing them, since they are not the acts of a reasonable being. Many species of insanity arise remotely from what in a moral view is a criminal neglect or fault of the party, as from religious melancholy, undue exposure, extravagant pride, ambition, &c. Yet such insanity has always been deemed a sufficient excuse for any crime done under its influence.*

That this subject has not escaped the observation of European writers, is evident from the following observations of Orfila.

"Drunkenness sometimes causes a short access of delirium or mania, to which the name of *delirium tremens* is given. This state may continue some days or even weeks. It differs from drunkenness, in that the latter disappears in twelve or fifteen hours at most, if not renewed by drink. Certainly the individual seized with this delirium is not responsible for his actions, and if he is to be punished for the immorality of the cause of his reprehensible act, a large number of the insane must also be included in a similar infliction."†

I am reminded, however, by a communication from my friend, the Hon. David Buel, jun. of Troy, that this plea may be, and indeed has been carried farther than the nature of the disease will warrant. It is as important to guard against this as it is to present the defence which the actual disease permits.

The following are the circumstances of the case now referred to.

"Thomas Harty, the prisoner, was addicted to drinking spirituous liquors. He resided in Albany during the winter of 1832 and 1833; and while there, had several paroxysms of delirium tremens, which were of short duration. In the spring he removed

* Mason's Reports, vol. 5, p. 28. *United States v. Drew.* American Jurist, vol. 3, p. 4.

In a recent trial in the western part of this state, of a parent, for the murder of his son, six years old, by blows and whipping, I can find no proofs of delirium tremens, before or during the transaction. He would, however, appear to have had it after his committal to prison. I speak from reading the newspaper account only.

† Orfila's Leçons, 2d edit. vol. 2, p. 127. Henke would also seem to have advanced a similar opinion. "*Ænomania* (amena vinolenta,) from the abuse of brandy." "Et de la liqueur appelée *Grog*." Bulletin Des Sciences Med. vol. 14, p. 184.

The Boston Medical and Surgical Journal, vol. 2, p. 569, has a well argued paper in defence of the doctrine maintained in the text. A remark is made in it, which cannot be questioned, and may render judicial proceedings more secure. It is, that delirium tremens is a disease, that from its striking peculiarities, cannot be feigned.

to Troy. On the 31st of August, he murdered his wife by a blow with an axe. He had lived three weeks previous to this period in a certain house, and during that time exhibited no marks of insanity. Some ten days previous to the homicide, he had ill treated his wife, and for a few days, she refused to live with him, but at length returned home.

“After the deed was done, his actions and conversation induced some persons to think he was insane. But the most intelligent individuals who conversed with him, did not consider him so. And there was no proof of insanity or delirium tremens, either on the morning on which he killed his wife, or for several months before.

“The prisoner’s counsel dwelt upon the proof of his having been affected with delirium tremens the winter previous, and on the evidence that he was addicted to drinking; and they endeavoured to infer from that evidence, in connexion with his equivocal conduct after the perpetration of the act, that he was *non compos mentis*. The argument addressed to the jury was to this effect. Drunkenness is allowed to be one of the common causes of insanity, and it is proved that the prisoner had paroxysms of delirium tremens during the preceding winter. Is it not an authorised presumption that he was insane when he committed the act?”

On the part of the people, Mr. Buel met this argument by distinguishing between paroxysms of delirium tremens and a permanent state of mental alienation, and especially relied on the absence of any proof of insanity or delirium for several months *before* the commission of the act.

The jury found the prisoner guilty; and I apprehend with perfect justice. If the prisoner was to be excused on the ground of *delirium tremens*, certainly proof of its presence either *before* or *immediately after* the crime, should have been presented. I have already stated, that it is a disease of short duration, and until it begins to break down the constitution, the recovery of the patient is as perfect, as from any other disease.

Again, there was certainly no indication of the presence of that insanity which is consequent on habits of intoxication.* The

* In the former edition, (vol. 1, p. 370,) I made the following remark: “It is to be feared, that cases may sometimes occur, in which the dividing line between sanity and insanity may be overleaped, in the ardour to punish a foul homicide.” The remarks of Mr. Buel on this are so just, and indeed so conformable to my subsequent

proofs of the presence of either, should never be merely presumptive.

Old age. The following, according to Dr. Prichard, are among the striking features which attend the dementia of old age. Recent impressions and events are speedily and rapidly obliterated from the mind, while ideas long since stamped on it, remain in nearly their original force, and are capable of being recalled by association or attention. The individual may scarcely know where he is, yet he readily recognises persons with whom he has been long acquainted. There is therefore an incapacity for attention and for receiving present impressions, but certainly nothing that deserves the name of a maniacal illusion. It is merely a loss of energy in some of the intellectual operations, while the affections remain natural and unperverted.* Such a state may, however, be followed by actual dementia, or approach to idiocy.

As to legal proceedings, it appears now to be decided, that debility of mind in consequence of old age, may render a person unfit to manage his own affairs, and his property may be placed in the hands of a committee, in the same manner as that of a lunatic.†

A case was decided on this principle in the Chancery Court of this state, some years since. An individual eighty-five years old, was seised of a large real estate, and it was alleged from repeated acts, that his imbecility of mind, (although not a lunatic,) and his want of understanding were such, as to render him incapable of managing his affairs. The Chancellor awarded a commission in the nature of a writ of lunacy, to inquire whether the facts were accordant to the above statement, and he also directed that the individual should be present, so that the jury might have the inspection of him. The inquisition was taken and returned, finding that J. B. was, and for one year preceding had been, of unsound mind, and mentally incapable of managing his affairs. A committee of the estate was accordingly appointed.‡

experience, that I cannot avoid quoting them. "In my experience, juries in this country, in capital cases, are not apt to convict under the influence of excitement produced by the atrocious nature of the crime. On the contrary, I think there is rather an increasing readiness to find a place to hang a doubt on—and doubts, you know, insure acquittal."

* Prichard, art, Insanity, in *Cyclopedia of Practical Medicine*, vol. 2, p. 872.

† Collinson on Lunacy, vol. 1, p. 66.

‡ Johnson's *Chancery Reports*, vol. 2, p. 232. In the matter of James Barker. See, also, Vesey's *Reports*, vol. 12, p. 446, *ex parte* Cranmer. But the greatness of a tes-

Dr. Conolly, in noticing this subject, mentions a frequent source of error. It is, that persons are often appointed to make the inquiry on the supposed state of mind, who are unacquainted with the individual, and the result is a restraint and watchfulness on the part of the aged, which naturally induces an appearance of perfect correctness of deportment. A slight suspicion excited by sordid domestics, or other interested persons, may prevent an exhibition of the actual enfeebled state of mind, and more decidedly give them up to the plots by which property is so frequently alienated from the legal heirs. These circumstances should therefore be remembered in all commissions, and a free and unrestrained intercourse be deemed a most essential means in forming a proper opinion.* But on the other hand, no language is too strong to characterise their conduct who shall endeavour to make the imbecility of age an excuse for robbing its subjects of their comforts, or for confining them in an asylum.

It is impossible to extend this investigation into the numerous cases, which may present doubts as to the strength of mind of individuals. Every instance must be judged on its own merits; and while weakness of understanding deserves protection, it should be remembered that too nice an investigation of eccentricities and imperfections may lead to oppression and injustice.†

V. *Of the state of mind necessary to constitute a valid will.*

Sir William Blackstone, in his introductory remarks on the study of the law, observes, that were the medical profession to inform themselves on the doctrine of last wills and testaments, or at least so far as relates to the formal part of their execution, they might often use this knowledge with advantage, to families,

tator's age is not alone a proof of his incapacity to make a will, for a man of one hundred years of age may yet be very competent. (Call's Virginia Reports, vol. 4, p. 423. Also, *Darling v. Bennet*, Massachusetts Reports, vol. 8, p. 129. Johnson's Chancery Reports, vol. 5, p. 158. *Van Alst v. Hunter*.)

* Conolly on Insanity, p. 440.

† In the case of Lord Donegal, it was found that he was of weak understanding, although he gave rational answers about his estate, but *not to any questions about figures, as to which he could not answer the most common*. Lord Hardwicke did not think that a sufficient foundation to grant a commission, and said, that if he granted any, it must be that of idiocy. (Vesey senior's Reports, vol. 2, p. 407.) On this, Lord Eldon remarked, that he does not know what his predecessors intended, in intimating that the incapacity, proved by the want of power to comprehend the most simple proposition in figures, as that two and two make four, is not evidence of an *unsound mind*. He considers that this deficiency is an evidence of it, though to be estimated with reference to age, situation, and all other circumstances. (Sherwood v. Sanderson, Vesey's Reports, vol. 19, p. 285.)

upon sudden emergencies.* Having such authority, it will not, I trust, be deemed presumptuous, if I preface the consideration of the present subject with a brief sketch of the legal requisites for making these. This must also be my apology for noticing some points in this section, which might, with perhaps greater propriety, have been considered in previous ones.

It must be observed, in the first place, that the law makes an important distinction between the disposition of real and of personal property. This is borrowed from the English law, but it is transferred into our own statutes.

Nuncupative wills. By this term is understood a verbal disposition of a person's property. The law concerning these has of late years materially altered in this state. It may, however, be useful to mention the former in connexion with the present enactment.

Until 1828, it was enacted, that no nuncupative will should be good, where the estate thereby bequeathed shall exceed the value of seventy-five dollars, unless the same be proved by the oath of three witnesses at least, who were present at the making thereof, nor unless it be proved, that the testator, at the time of pronouncing the same, did bid the persons present, or some of them, bear witness, that such was his will, or words to that effect—nor unless such nuncupative will be made at the time of the last sickness of the deceased, and in his dwelling-house, or where he had been resident for ten days or more, next before the making of such will, except such person was surprised or taken sick, being from home, and died before his return to the same. It is further ordained, that after six months from the speaking of the pretended testamentary words, no testimony shall be received to prove any nuncupative will, except the said testimony or the substance thereof, was committed to writing within six days after the making of the said will, and also, that no letters testamentary or probate of any nuncupative will, shall pass the seal of any court until fourteen days, at the least, after the death of the testator, shall be fully expired, nor shall any nuncupative will at any time be received to be proved, unless process has first issued to call in the widow or next of kin to the deceased, to the end that they may contest the same, if they please.†

* Blackstone's Commentaries, vol. 1, p. 13.

† Revised Laws, vol. 1, p. 367.

A nuncupative will has also been decided to be not good, unless it be made when the testator is *in extremis*, or overtaken by sudden and violent sickness, and has not time to make a written will. The words "last sickness" in the statute just quoted, are understood to mean the last extremity.*

By the Revised Statutes, however, the power of making these wills is nearly taken away. The following is the existing law: "No nuncupative or unwritten will, bequeathing personal estate, shall be valid, unless made by a soldier, while in actual military service, or by a mariner while at sea.†

So also, in England, by a recent enactment, (1 Victoria, chap. 26, July 3, 1837,) there can be no longer parol or nuncupative wills, except in the cases of soldiers and seamen.‡

Secondly, a will or bequest of personal property. The handwriting of the person bequeathing was formerly sufficient to pass property so given, but witnesses are now required, as with testaments.

Lastly, Testaments by virtue of which real property is devised, must be in writing, and signed by the party making the same, or by some other person, whom he expressly directs to sign it for him, and they must be attested and subscribed by two witnesses, at least. This provision applies equally to wills of real or personal property, and the witnesses are further required to add their place of residence.§

We may now add that none of these are valid in law, if made

* Johnson's Reports, vol. 20, p. 205. *Prince v. Hazleton*. In this case, the supposed nuncupative will was made several days before the death of the testator, and although ill of a liver complaint, it does not appear that he had any idea that his dissolution was so near.

† Revised Statutes, vol. 2, p. 60.

‡ Companion to the British Almanac, 1838, p. 138.

In Pennsylvania, where the old English law is in force, the question, as to what constitutes a valid nuncupative will, lately came up under the following circumstances. The testatrix, Priscilla Yarnall, had been afflicted with pulmonary consumption for six months before her death. She seems to have been conscious of the danger of her situation, but it is not very clear that she had abandoned all hopes of recovery. Nine days before her death, she made the alleged nuncupative will. She retained all her faculties to the last, although weak in body.

The court, among other objections, decided against the validity of the will, because such a will is not good unless made when the testatrix is in *extremis*, or is overtaken by sudden and violent illness, and has not time or opportunity to make a written will. (Rawle's Pennsylvania Reports, vol. 4, p. 46.)

§ Revised Statutes, vol. 2, p. 63. The Revisors of the laws of Pennsylvania have proposed a similar enactment in that state, viz: that all wills shall be in writing and signed as above, except *in extremis*. (American Quarterly Review, vol. 13, p. 44.)

by any infant, idiot, or person of insane memory. Here is the point at which the subject enters into legal medicine, and under this law, it happens that the testimony of a physician is often required.

In law, a person is considered an infant, until he arrives at the age of twenty-one, and the construction of this is, that if he is born on the first day of January, he is of age to do any legal act on the morning of the last day of December.* Infants, according to the ecclesiastical or civil law, if above the age of fourteen, may, however, bequeath personal property, but no real estate. This respects males, as females may make a will of personal estate at twelve.

In this state, every male of the age of eighteen and upwards, and every female, not being a married woman, of sixteen years and upwards, may give and bequeath personal property, by will in writing.†

“Madmen, or otherwise *non-compotes*, idiots, or natural fools, persons grown childish by reason of old age or distemper, such as have their senses besotted by drunkenness—all these, are incapable by reason of mental disability, to make any will, so long as such disability lasts.”‡

Among the diseases which incapacitate an individual from making a valid will, or at least render his rationality doubtful may be enumerated the following: lethargic and comatose affections, whether arising from some internal affection, or from external injury. These suspend the action of the intellectual faculties; so also does an attack of apoplexy, and even, if patients recover from its first effects, an imbecility of mind is often left, which unfits an individual for the duty in question. Phrenitis, delirium tremens, and those inflammations which are accompanied with delirium, also impair the mind. Finally, in typhoid

* As in the following case, which was decided by the House of Lords in February, 1775, on an appeal from the Court of Chancery. An estate was bequeathed to Thomas Sansam as soon as he should arrive at the age of twenty-one. Now he was born between the hours of five and six on the morning of the 16th of August, 1725, and died about 11, in the forenoon of the 15th of August, 1746, being killed by a fall from a wagon. The question was, whether he had arrived at the full age. The Chancellor (Lord Camden,) had so decided. It was urged, that more than sixteen hours were wanting to complete the term, but that plea was overruled by their Lordships, and the decree affirmed, because he was living on the day that completed the period. (Dodsley's Annual Register, 1775. Petersdorff's Abridgement, vol. 10, p. 536.)

† Revised Statutes, vol. 2, p. 63.

‡ Blackstone, vol. 2, p. 497.

fevers, the low state which usually precedes death, is one that may be considered as incapacitating the individual.

On the other hand, there are many fatal diseases, in which the patient preserves his mind to the last, and all dispositions of property made by him are of course valid. Of these, none is more striking, than the clearness of intellect which sometimes attends the last stages of phthisis pulmonalis.

The symptoms—the state of the individual, his conversation and actions, should all be canvassed, and from them an opinion must be formed.*

This, however, is only a general enumeration; and I have thought that a sketch of some of the cases scattered through law books and medical journals, may prove of service, at least to the medical profession. They are contained in works not generally accessible to physicians, and a perusal of them may prevent many of those difficulties which are so apt to embarrass medical witnesses. I have arranged them under the respective diseases that were the subject of inquiry.

Apoplexy. In *Cook v. Goude and Bennet*, the testator had made a will after an attack of apoplexy, from which he recovered. He subsequently attended to business of every description and travelled to various places. Death followed in three years after the first attack, from a second apoplectic fit. The testimony varied, and it was asserted by some that he had been frequently dull and lethargic, but Sir John Nicholl decided in favour of the will, because (along with other circumstances,) incapacity was not proved.†

In *Waters v. Howlett*, Sir John Nicholl remarked, that the allegation pled an attack of apoplexy in June, 1826; that the will was executed in November, 1826; and that there was a subsequent attack of the disease in 1828, with consequent imbecility. He adds, that “the fifth and the remaining articles heap together a number of circumstances, which usually, or at least frequently occur in persons who are subject to apoplectic or paralytic attacks, especially about the period of those attacks, but which also generally subside after a time, and then the patient again is rational and capable. In support of such circumstances, (he observes.) *persons who accidentally visit the deceased, are usually*

* Foderé, vol. 1, p. 261.

† Haggard's Ecclesiastical Reports, vol. 1, p. 577.

*brought to depose; but their evidence almost universally turns out to be of no weight against acts of capacity at other times, particularly if there is no appearance of fraud in the testamentary act itself.”**

An individual was suddenly seized with a fit of apoplexy, while walking in his garden. It deprived him of his speech, which indeed he never regained, and affected his senses. Three weeks after, he executed the disputed will. Although speechless, he appeared sensible; his hand was guided to make a mark. A witness deposed to his apparent understanding, and stated, that when going away, he desired the deceased to give him his hand, which he immediately did. The medical witness, however, deposed that he had never seen him, after the fit, when he appeared to have any sense; there might, however, have been intervals when he was not present. Other witnesses corroborated this. Sir George Lee decided against the will, thinking him not sufficiently capable of making and executing it.”†

Dr. Hastings was required professionally to visit, on the 6th of June, 1826, a rich farmer in the county of Hereford, England, and found him in a very lethargic state. It appears that although formerly sober, yet of late years he had become a confirmed drunkard. His speech was much impaired, and he was not always able to articulate so as to express the idea in his mind. He complained of noises in his ears, and imperfect vision. His gait was unsteady, and there was a constant trembling of his hands. He, however, answered all the questions put to him with propriety, and did not exhibit any imbecility of mind. He performed a somewhat difficult sum in addition, with accuracy. He told Dr. Hastings the collect for the day, it being Sunday, and read part of it to him. He wrote down, in words, the distance of his dwelling from the adjoining town.

The bodily symptoms evidently threatened an attack of apoplexy, and such indeed was the result. After many fruitless attempts to break up the habit of intoxication, he sunk into a state of mental imbecility, and died of apoplexy in January, 1827. Dr. Hastings never saw him after the first visit, until the day before his death.

The testator had made a will, on the 26th of April, 1826. and

* 3 Haggard's Ecclesiastical Reports, p. 790.

† Lee's Ecclesiastical Reports, vol. 2, p. 229. Bittleston, by her guardian, v. Clark.

its validity was contested. It seems that some time in 1825, he had been seized with symptoms of palsy, but which, by proper remedies, had been considerably relieved. He, however, was subject to fits of delirium tremens; and during these, acted strangely and incoherently. Generally speaking, from the testimony, the state of his mind at the time of making the will was similar to that observed by Dr. Hastings. The jury, under the direction of Baron Vaughan, decided in favour of the will.*

Palsy. In the case of *Clark v. Fisher*, brought before the Chancellor of the State of New York, on an appeal from a surrogate's decision, the testator died in May, 1827, aged about eighty years. Four years previous to his death, he had an apoplectic fit, which terminated in paralysis, and this continued until his death. He was confined to his bed during these four years, although able to ride out a few times, being helped into his carriage. His speech was much impaired, but he was able to make himself understood by those who were well acquainted with him. The contested will was made in May, 1827, a short time previous to his death.

The Chancellor (Walworth) in his opinion, states that upwards of fifty witnesses were examined before the surrogate. As usual, great diversity of opinion existed among them. Aware of the tendency of prejudice or feelings to bias their views, he reviews the evidence, and establishes from incontestable proof, that the testator's mind, at the commencement of his disease, was such as totally to incapacitate him from making a will. After the first year, he was but seldom visited by those who were formerly acquainted with him; and those who did so, vary in opinion; but in 1826, it would seem that his memory was good respecting long past events. This, however, is so common during the decrepitude of old age, that the Chancellor remarks, it can hardly be relied on as a proof of mental capacity. At the period, however, of executing the will, he could not make himself understood

* *Midland Medical and Surgical Reporter*, vol. 1, p. 410. Dr. Hastings mentions two other cases, in which apoplectic symptoms, evidently resulting from long continued and severe disease of the brain, were still unaccompanied with any material injury of the intellectual functions. In another, the individual, aged between fifty and sixty years, roused suddenly from his stertorous sleep, "called to his brothers to attend, as he would dictate his will. To the great astonishment of all present, he, in the clearest manner, dictated a very just will, leaving his property in trust for his children. He directly afterwards, without mentioning any other affairs, again relapsed into coma; from which, before his death, he again aroused, and then gave some directions with respect to an annuity to a clerk, who had been a faithful servant to him." This, however, was a case in which the comatose symptoms supervened on an attack of erysipelas.

by the person who drew it, even in reply to questions directly put to him. It was all done by the direction of a wife whom he married after his first attack. The will was cancelled.*

The following is a Scotch case. Mr. Gardner had been for many years an active man of business, and of a vigorous mind. He was struck with palsy in 1814, by which his right side was disabled, and his speech considerably affected. He ceased to take any active charge of business, but various loans were made by him through the assistance of his wife and by the agency of his law agent. He occasionally became intoxicated, and was allowed to take two or three glasses of whiskey daily. His general health was good, but he sometimes cried and laughed without any apparent cause, which some of the witnesses imputed to imbecility, while others stated that it was a nervous or hysterical affection. He occupied his time in reading, and although it was difficult to communicate with him, yet those witnesses who did come into communication with his mind, deposed that it was quite sound and acute, and that his memory, both of old and recent occurrences, was particularly vivid and correct. His mode of communicating was by writing on a slate or piece of paper, (he having taught himself to write with his left hand,) and he also made use of an alphabet, pointing out the letters of the words he meant to express with a nod, or with his finger. In 1823, he had a second shock, which affected his left arm to the elbow; his speech was also much impeded, and he could only say aye and no. He thenceforth ceased to go out of the house, but occupied his time in reading and communicated as formerly. Almost all the pursuer's witnesses gave it as their opinion, that he had not a mind capable of making such a settlement as the one in issue, but one of them, (the gentleman who had acted as his law agent in regard to the loans,) stated, that although he did not think he was capable of originating such a deed, yet he thought he had mind sufficient to understand it, if read over to him. The witnesses for the defenders (who stated various facts as to his memory,) gave it as their opinion, that his mind was quite sound. It was proved, that at the time of execution, the deed was not read over, and no written instructions were put in evidence, but it was proved that the deed of 1827 had been read

* Paige's Chancery Reports, vol. 1, p. 171. See also *Scribner v. Crane*, *ibid.* vol. 2, p. 147.

to, and approved of by him, and that both under that deed, and the one under dispute, the daughter and her children derived much more benefit than they could if it were set aside.

Lord Cringletie in his charge to the jury, urged that it was in proof, that the memory of the grantor was entire, and observed that it is the first of the intellectual faculties that decays. The weight of testimony of those who held the most communication with him, was also in favour of his ability. The jury found for the will.*

A testator, ten years before his death, and in perfect health, executed a will, and subsequently a codicil; and two and a half years before his death, after a paralytic stroke producing at least great bodily infirmity, having executed a second codicil, materially departing from those instruments; and six months before his death, a third codicil, revoking the second, and reverting to the former disposition, a probate of the will, and of the first and third codicils, was granted, their being no satisfactory proof of a change in his affections, and the evidence of volition and capacity being at least as strong in support of the third as of the second codicil.†

In a case before Sir George Lee (1752,) the testator having the palsy, and being dissatisfied with a former will, ordered a new one to be executed. The attorney drew it according to her directions, read it to her, and she approved, by answering "yes." or "it is very right." She raised herself up to execute it, but the palsy in her hand was so great that she could not hold the pen. Judgment was given in favour of the unexecuted will.*

Esquirol was consulted on the following case. A bon vivant of apoplectic make, was, at the age of 64. attacked with hemiplegia and its usual symptoms. He became morose and sluggish, and suffered under trembling of the limbs, deafness, difficulty of speech, &c. Could a person, under these circumstances, dictate

* Cases in the Court of Session, (Scotland,) vol. 11, p. 1049. *Simpson v. Gardner's trustees.*

† *King and Thwaites v. Farley*, Haggard's Ecclesiastical Reports, vol. 1, p. 502. See also *Marsh v. Tyrrel*, 2 Haggard's Ecclesiastical Reports, p. 84. Dr. Burrows was called in on the day of making the last will, for the purpose of ascertaining the capacity of the testator. She had had several paralytic strokes. Dr. Burrows would only give a limited opinion, and desired a second interview. The will was in direct opposition to two previous ones, made when in perfect health. Judgment against it.

The state of mind after a paralytic stroke is also discussed by Sir John Nicholl in *Blewitt v. Blewitt*. 3 Haggard, p. 410.

* *Lee's Ecclesiastical Reports*, vol. 1, p. 130. *Martin v. Wotton.*

and understand a will written for him two months previous to death ! It was replied, that although the above are signs of cerebral lesion, yet they do not necessarily suppose a loss of intellect. Reason may be present, although not so perfect. The number of witnesses required in France to attest a legal signature to a will, is also urged as a proof that so many persons could not have been mistaken as to the state of mind.*

General weakness and debility. The will of a married woman, obtained when she was in an extremely weak state, nine days before death, by the active agency of her husband, the sole executor and universal legatee, and which will wholly departed from a former one deliberately made a few months before, was pronounced against, the evidence in favour not being satisfactory. She suffered much from pain and weakness, and took laudanum largely during her illness.†

In Scotland, there is a peculiar law to protect dying persons from importunity. No settlement or gift executed after the commencement of the disease of which the person dies, except those in the ordinary administration of the estate, are valid and this, even if the grantor be not confined to his bed. If he survives sixty days after, or has been to market unsupported, it is good.‡ I will mention one or two decisions under this law.

A person in advanced life had been afflicted with a stuffing and cough, and swelled leg, but it did not appear that these complaints existed within sixty days before, or were the cause of his death. It was proved that though not regularly confined to bed or to the house, his general health was infirm, and he died in the act of stepping out of his bed. He made his will thirty-eight days before his death. As there was no distinct evidence that a fixed disease was present within sixty days, or that it was the cause of death, the decision was in favour of the deed.§

In another case, a person addicted to habits of excessive drinking, and who had been confined to bed for several weeks from debility and exhaustion, having executed a settlement of her

* *Annales D'Hygiène*, vol. 7, p. 203. Dugald Stewart, although struck with palsy in 1822, and unable to take general exercise, or to use his right hand, or to articulate distinctly, notwithstanding composed the third and fourth volumes of his work on the *Philosophy of the Human Mind*, between it and 1828, when he died. (*Brewster's Edinburgh Journal of Science*, vol. 10, p. 201.)

† Haggard's *Ecclesiastical Reports*, vol. 2, p. 169. *Mynn v. Robinson*.

‡ Bell's *Dictionary of the Law of Scotland*, art. *Death Bed*. As to the last provision, see *Kyle v. Kyle*. *Cases, Court of Session*, vol. 3, p. 449.

§ *Cases, Court of Session*, vol. 2, p. 474. *Robertson v. McCaig*.

landed estate and died in eight days thereafter, without having been once up, except to have her bed made—and a medical gentleman having deposed that she had no formed disease, when he saw her on the third day after the execution of the deed, and that she died of an access of peripneumonia notha, which is a very common, though not a necessary result of the state in which the party previously was, it was held that she was not to be considered on death bed at the date of the execution of the deed.*

Old age, implying mental imbecility. Kinleside v. Harrison. In this case, the testator between 86 and 88 years of age, made several codicils to his will, which were disputed on the ground of mental imbecility, the result of old age. A large mass of contradictory evidence was presented. It appears to be admitted that there was occasional incapacity from violent nervous attacks, but he survived two years after making the codicils, and managed his own concerns. Thus he drew drafts, all of which were accurate and conformable to the variations required in them. His memory failed him occasionally and he was deaf, yet he was able to play whist well until a few months before his death, and always paid his own bills and entered his payments as they were made, in his account book. Sir John Nicholl decided in favour of his capacity.†

In Brydges v. King, Mrs. Brydges had made a will while in a state of health, material parts of which were altered by a codicil, executed ten days before her death. She was above seventy-two years of age, had been confined to her room three months, and to her bed two months. Her complaint was visceral, and from laying in bed she had become excoriated so that it was necessary to dress the sores from shoulder to hip, and although her bowels were so torpid as to require injections, yet from her weakened state, she was not able to bear them. In this condition, the codicil in favour of her personal attendants, was executed. The regular physician of the deceased had not seen her for several days previous and subsequent, but he deposed to her being more or less lethargic for months, and did not believe her capable of transacting important business. It was also in evidence, that her relatives and solicitor were excluded, under

* Cases, Court of Session, vol. 6, p. 367. M'Kay v. Davidson.

† 2 Phillimore, p. 449.

various pretences, from seeing her. The codicil was declared invalid by Sir John Nicholl.*

In *Ingram v. Wyatt*, Sir John Nicholl notices particularly the subject of imbecility of mind. This defect, he remarks, seems to proceed from want of quickness, activity and motion in the intellectual faculties. And thus sometimes different faculties are found failing in different persons. "For example, the memory is sometimes perfect where higher powers of the understanding are greatly defective." In an individual of imbecile mind, "the understanding has made little progress with years; it has not matured and ripened in the usual manner; yet even in such individuals, unless the imbecility be extreme, some improvement will have taken place; some progress in knowledge beyond mere infancy will have been made. By the help of memory, by imitation, by habit, such an individual will acquire many ideas, will recollect facts and circumstances and places and hacknied quotations from books, will conduct himself orderly and mannerly, will make a few rational remarks on familiar and trite subjects, may retain self-dominion, may spend his own little income in providing for his wants, as a boy spends his pocket money, and yet may labour under great infirmity of mind, and be very liable to fraud and imposition."

"The principal marks and features of imbecility are the same which belong to childhood, of course, (as already observed,) varying in degree in different individuals; frivolous pursuits, fondness for, and stress upon trifles, inertness of mind, paucity of ideas, shyness, timidity, submission to control, acquiescence under influence and the like. Hence these infantine qualities have acquired for this species of deficiency of understanding, the name of 'childishness.' The effect is, that where imbecility exists at all, and in proportion to its degree, it becomes necessary especially in a case exposed to other adverse 'presumptions,' to ascertain its extent with some accuracy, to see how far the individual was liable to be controlled by influence, to submit to ascendancy, to acquiesce from inertness and confidence in those acts, upon the validity of which the court has to decide."†

In *Bird v. Bird*, the will was executed ten days before death, by a person of 85, in weak bodily health; but the drawer and

* Haggard's Ecclesiastical Reports, vol. 1, p. 256.

† Haggard's Ecclesiastical Reports, vol. 1, p. 334.

witnesses of it were confirmed in their opinion as to capacity, volition and free agency by the adverse witnesses, and by the deceased's affections and declarations. Will pronounced for.*

A testatrix was old and greatly debilitated by the disease under which she laboured when she made her will and codicil, and the usual state of her mind, until her death, was that of great torpor and inactivity; "but her mind (say the Court) was evidently not deranged. It was in fact, rather a want of sensibility than a want of intellect, which marked her condition; for most, if not all the witnesses agreed, that she could, by any thing sufficiently interesting to attract her attention, be awakened and roused to activity; and when she was so, that she conversed intelligently, and invariably gave rational and pertinent responses to any interrogatories propounded to her." Some indeed thought, that she could not be excited for a time sufficient to make a will; others entertained a different opinion. And it was proved that she felt an extreme interest about making a will. She was a widow and childless, and had long determined against intestacy. The primary motive of this determination was the emancipation of her slaves, and this all agreed, was the object dearest to her heart. This was a subject then to excite her; and the subscribing witnesses were also decided as to her competency at the time of executing the will. The court therefore adjudged in favour of the will.†

It has been sometimes agitated, whether the loss of memory solely, is such a proof of mental imbecility, as to render a will invalid. On this point, the remarks of Chancellor Kent, in a case before him, are decisive. "The failure of memory is not sufficient to create the incapacity, unless it be quite total, or extend to his immediate family. The Roman law," he remarks, "seemed to apply the incapacity only to an extreme failure of memory—as for a man to forget his own name, *fatuus præsumitur qui in proprio nomine errat*. The want of recollection of names is one of the earliest symptoms of a decay of the memory; but this failure may exist to a very great degree, and yet 'the solid power of the understanding' remain."‡

* Haggard's Ecclesiastical Reports, vol. 2, p. 142.

† Little's Kentucky Reports, vol. 1, p. 252. *Watts v. Bullock*.

‡ Johnson's Chancery Reports, vol. 5, p. 161. *Van Alst v. Hunter*. In *Turner v. Turner*, (Little's Kentucky Reports, vol. 1, p. 101,) the Court make a remark which is probably correct; and if so, deserves attention. "There is less presumption of

Drunkenness. The testator was proved to have been not properly a madman, but an habitual drunkard; who, under the excitement of liquor, acted very like a maniac.

Sir John Nicholl held, that from the evidence it appeared that the testator was not under the excitement of liquor, and consequently not insane at the time of making his will; and he therefore established the will.*

Delirium. In *Evans v. Knight*, where the condition of the testator was inquired into, eight years after his death, it was endeavoured to be shown that he had been labouring under a delirium caused by a fatal attack of peripneumonia. This attack had been on him for some days. He made the will on the 21st of April, and died on the 24th. The physician who was called in, and who saw him a short time, inclined to the opinion that he was not in sound mind, but denied that he was in a state of mental derangement; "and in spite of a marked confusion of intellect, he could answer questions put to him, sensibly and rationally." A friend visited him on the same day, and heard him give instructions to the solicitor, without any leading questions being put. The solicitor also was satisfied of his capacity. Verdict in favour of the will.†

Suicide, as indicative of insanity. "Instructions for a will containing the fixed and final intentions of the deceased are valid, if the formal execution is prevented by death; and if there is no evidence of insanity at the time of giving the instructions, the commission of suicide three days after will not invalidate the paper, by raising an inference of previous derangement." Here the testator conversed sensibly and collectedly, and appeared perfectly rational when giving the instructions.‡

The existence of a lucid interval. The case of *White v. Driver*, related to the validity of the will of Mrs. Manning, who was proved to have been insane for several years, but the disorder was not uniform; nor did it always attack her with an equal degree of violence. She was at large during the greater part of her life, and under her own government. From the testimony

insanity at the time when a will was executed, where the testator is shown to have been previously afflicted with the mental debility attending old age, than there is where the mental malady is ordinary lunacy."

* *Ayrey v. Hill*, 2 Addams, p. 206. See also *Dodge v. Mecch*, (where the will was invalidated,) 1 Haggard's Ecclesiastical Reports, p. 612.

† 1 Addams, p. 229. See also *Lemann v. Bonsall*, *Ibid.* p. 383.

‡ *Burrows v. Burrows*, 1 Haggard's Ecclesiastical Reports, p. 109.

of the clergyman, the solicitor, the two apothecaries, and the nurse, "with all their suspicions awakened, and their vigilant observations called forth," it appeared that she was sane and rational during the transaction; and indeed it seems proved, that she continued so until her death, which was on the next day. The disposition of her property as made by the will, was "neither insane nor unnatural." Sir John Nicholl, (the judge,) therefore pronounced it valid.*

In another case, (*Cartwright v. Cartwright*,) Sir William Wynne enters more in detail into the circumstances which go to prove the existence of a lucid interval. "If it can be proved and established, that it is a rational act rationally done, the whole case is proved. What can you do more to establish the act? Because, suppose you are able to show the party did that which appears to be a rational act, and it is his own entirely, nothing is left to presumption in order to prove a lucid interval." The deceased, by herself writing the will now before the court, had plainly shown that she had a full and complete capacity to understand the state of her affairs and her relations, and to give what was proper in the way she has done. She not only formed the plan, but pursued and carried it into execution with propriety and without assistance. He was therefore in favour of the validity of the will, and this sentence was affirmed on appeal to the High Court of Delegates.†

Monomania—Hatred against relatives. One of the most difficult questions for decision, is where the charge of insanity rests on some obstinate and long continued feelings of hatred or malice against individuals, and which are evidently groundless. Thus Lord Erskine, in his speech on the trial of James Hadfield, speaks of a Mr. Greenwood, who, *whilst insane*, took up the idea that his brother had administered poison to him, and this became the prominent feature of his insanity. In a few months, however, he recovered, and returned to his profession, (that of a barrister) but could never divest himself of the delusion that his brother had attempted to poison him, and under its influence he

* 1 Phillimore's Ecclesiastical Reports, p. 84.

† 1 Phillimore, p. 90. But in *Groom and Evans v. Thomas*, where the deceased was proved to have been insane both before and after making the will, testimony showing calmness and the transaction of formal business, under the sanction of his family, was not deemed sufficient to rebut the presumption against the papers. It was, however, very doubtful, whether the testator had a lucid interval. (*Haggard's Ecclesiastical Reports*, vol. 2, p. 433.)

disinherited him. On a trial in the court of King's Bench, the jury found against the will, but a contrary verdict was had in the court of common pleas, and the suit ended in a compromise.

Another case of the same description, is that of *Dew v. Clark*, which forms the subject of one of Sir John Nicholl's most elaborate and able opinions, and I cannot omit recommending its attentive perusal to all of my young legal friends who wish to understand this intricate species of insanity.

Ely Stott died a rich man—leaving a widow (the third wife) and an only child. This child, a daughter, (now Mrs. Dew) was of the first marriage, and born in 1788, and it was shown that from her earliest infancy he had laboured under the strongest aversion against her, declaring that she was invested by nature with a singular depravity, was the victim of vice and evil, &c., and he continued in this opinion and made similar assertions as she advanced in life, and even until his death, in 1821. He left her £100 per annum, and she now sought, on the ground of his *partial* insanity, to break the will.

When the first application was made to Sir John Nicholl, he explicitly stated, that “no course of harsh treatment, no sudden bursts of violence, no display of unkind or even unnatural feeling *merely*, can avail in proof of the allegation; she can only prove it by making out a case of antipathy, clearly resolvable into mental perversion, and plainly evincing that the deceased was *insane* as to *her*, notwithstanding his general sanity.”

His decision on the will occupies many pages. He inquires what is the true criterion or test of the presence of insanity, and in answer, deems it comprisable in a single term, viz. *delusion*—a delusion out of which the patient is incapable of being *permanently* reasoned. The term *partial* insanity is perfectly consonant with the law of England—a man is not mad on all subjects.

In addition to the circumstances mentioned above, as to the delusion of Mr. Stott against his child, it was proved by many witnesses, that even in early age, the burden of his conversation was her depravity and profligacy; and this went on from year to year, progressively increasing. His treatment of her was harsh to an extreme; he burst into rage whenever she appeared, and could not bear the sight of her. She never sat down to table with him, was compelled to do the most menial work, and was denied every thing, except the most common articles of

dress. He stripped her naked and flogged her, and then rubbed her back with brine; and even when a woman grown, of 17 up to 21, would knock her down and strike her with a whip. She fled from these cruelties, and received, through the assistance of her friends, a situation in a school, and where she was fitted for a governess. The clergyman of the parish, to whom Mr. Stott had complained of his daughter, became acquainted with her, and was surprised to find her far different from what had been represented. Fruitless efforts were made by him and her to produce a reconciliation, but he states that the mere sight of her appeared to excite the father, and he did not deem it safe to leave *her* in the house. "The deceased's state of mind was clearly and essentially different from that of a merely wicked man or of one under the influence of a prejudice, however strong." It was a complete delusion, which he had no power of resisting, and which was liable to, and did, go frightful lengths, in the absence of temporary external restraints.

It appeared in testimony, that Stott had required his daughter to write down her thoughts for his inspection.

Other circumstances were proved, indicative of insanity on several subjects—such as his conduct to his first wife, his blasphemy while reading the Bible, and his extraordinary prayers.

He was a medical electrician, and conceived himself endowed with supernatural powers in the use of his apparatus. He had also imbibed an idea of the feasibility of delivering pregnant females by means of this agent, and actually proposed to a neighbouring baker, to try the experiment on his wife.

The will was declared void.*

In a recent case, the testator had been a fellow of Queen's College, Oxford, and for the last twenty years of his life, rector of a living belonging to that college. He was always eccentric in his habits, and of late years had been very retired. In consequence of being taken very ill, and two of his servants at the same time, with vomiting and purging, he believed that an attempt had been made to poison him. On the advice of his solicitor and physician, who then thought that he had rational grounds for his suspicions, an investigation was made, but the gentlemen who conducted it were satisfied that there were none. The testator, however, remained in the belief, that the eggs, milk

* *Dew v. Clark*, in 1 Addams, p. 279, 2 Addams, p. 102, 3 Addams, p. 79.

and butter sent to him by Harrison, his nephew-in-law, and his church warden, were poisoned, and this continued to his death.

The will was all in the testator's hand-writing, without erasure or alteration, regularly attested by two clergymen, who, although aware of his opinion respecting poisoning, unhesitatingly swore to their belief of his perfect mind. The solicitor and physician gave similar testimony. His property was all bequeathed to Queen's College, in trust for the poor of the parish where he resided, and it appeared on the trial that he expressed an intention of doing this long before he had the notion of poison.

The testamentary papers were opposed by the next of kin, on the ground that they were prepared and executed when the testator was impressed with the belief of poisoning, and while he was of unsound mind and under mental delusion. Sir John Nicholl said, that "at all events, it was a case of *monomania*, for upon every other subject, from the time in question to his death, the deceased acted as a person of sound mind, as much as he had ever been; he managed his house, his property and his farm, granted leases, received tithes, kept accounts, recognised his will, held rational conversation, and did church duty. A *monomaniac*, to affect such an instrument, under such circumstances, should be clear in point of existence and decided in character, beyond all doubt. That the deceased thought and believed that an attempt had been made to poison him, seemed to be a fact established; but was it proved than his opinion in that respect was a mere morbid insane delusion, rendering him intestable? The question was not, whether the attempt to poison was really made, but whether he had grounds for suspecting it? or whether, as pleaded, 'the deceased had no rational grounds whatever for his belief.' " The court pronounced in favour of the will.*

The following case was adjudicated in Kentucky, in 1822. George Moore made his will on the 11th of April, 1822. He was sick and low, but in his right mind, and indeed more so than the witnesses had seen him for some time. About twenty-four years previous to his death he had been seized with a dangerous fever, from which he, unexpectedly to all, recovered. Some years afterwards, he indulged in habits of intoxication, and these continued to the period of his dissolution. When not under the

* Haggard's Ecclesiastical Reports, vol. 3, p. 527. Shelford, p. 301. Fulleek v. Allinson.

influence of liquor, he was feeble and inactive; and it was precisely in this situation that he executed his will, evincing intelligence sufficient, in the opinion both of his physician and the attesting witnesses. The court therefore observed, that they would have no hesitation in admitting the instrument to record, were it not for the following circumstances.

The testator was a bachelor, but had two or three brothers who resided within the state. He owned a female slave, his mistress, and who possessed considerable influence over him. During his severe illness, many years previous, he was completely deranged, talked much of his immense wealth, and then conceived an antipathy to his brothers, contending that they designed to destroy or injure him, although they attended him constantly in his illness. This antipathy continued, with a single exception, when he made a will in their favour, (afterwards cancelled) until his death. When inquired of by one of the witnesses, why he disinherited his brothers, he became violently irritated, and declared that they had endeavoured to get his estate before his death. "He cannot, therefore," said the court, in their opinion. "be accounted a free agent in making his will, so far as his relatives are concerned, although free as to the rest of the world. But however free he may have been as to other objects, the conclusion is irresistible, that this peculiar defect of intellect did influence his acts in making his will, and for this cause it ought not to be sustained. It is not only this groundless hatred or malice to his brethren that ought to affect his will, but also his fears of them which he expressed during his last illness, conceiving that they were attempting to get away his estate before his death, or that they were lying in wait to shoot him, while on other subjects he spoke rationally. All which are strong evidences of a derangement in one department of his mind, unaccountable indeed, but directly influencing and operating upon the act which is now claimed as the final disposition of the estate."

The counsel for the appellants presented a petition (in writing) for a re-hearing, in which the objections to the doctrine of partial insanity are considered. It is well worthy of perusal, and its main object is to show that what by many are deemed *delusions of the head*, may originate from *depravity of the heart*. The court, however, overruled the petition.*

* Littell's Kentucky Reports, vol. 1, p. 371. Johnson v. Moore's heirs.

Esquirol relates the following case as occurring in France. A respectable individual, 44 years old, of large property, and holding a very lucrative office, became exceedingly discontented with the division of some property made by his parents during their lifetime. He was suspicious of all, but particularly of his brothers and sisters. This soon extended to his domestics, whom he believed in a plot against him. He supposed himself surrounded by assassins, and went constantly armed. An anonymous letter completed his distracted state. In this condition he made his will, in which he stated his apprehension of being murdered by his relatives, domestics, &c. and left his property to several persons whom he deemed his friends. Shortly after, however, he revoked several legacies, because the individuals had proved traitors to him, revealing his secrets, and becoming accomplices of his relatives. In six days after signing a third codicil, he hung himself, and in his room a letter was found, saying that in consequence of discovering new plots, he had resolved to destroy himself. Esquirol was consulted on the validity of the will. This change had gone on for three years, and was literally a *panophobia*—a fear of every body—although, on other subjects, he had appeared rational. He did not doubt the insanity of the testator.*

As to the mode of proving whether an individual is competent to make a will, this, of course, must be according to the ordinary rules of evidence. A testator is always deemed sane until the contrary is proved; and the *onus probandi*, as to his mental incapacity, lies on the party who alleges his insanity. But if a mental derangement has been proved, it is then incumbent on the devisee to show a lucid interval, or the sanity of the testator at the time of executing the will.†

An extraordinary case was tried in 1762, in the King's Bench in England, where the three surviving witnesses to the testator's will, and the two surviving ones to a codicil made four years sub-

* Annales D'Hygiène, vol. 3, p. 370. A similar case, where long continued jealousy led to suicide, was tried at Liege in 1802; and the will made under the influence of this passion was annulled. (Causes Célèbres, par Mejan, vol. 13, p. 427.)

† Johnson's Reports, vol. 5, p. 144. Jackson *ex dem.* Van Duzen and others, v. Van Duzen.

In a case, however, where the attesting witnesses were disinterested medical men, and gave evidence strongly in favour of the testator's sanity, the Ecclesiastical Court would not set aside the will, on proof by interrogatories, without plea, that the deceased, seventeen years before, had been under an insane delusion. (Haggard's Ecclesiastical Reports, vol. 3, p. 273. Kemble and Smales v. Church.)

sequent to the will, and a dozen servants of the testator, all unanimously swore him to be utterly incapable of making a will, or transacting any other business, at the time of making the supposed will and codicil, or at any intermediate time. To encounter this evidence, the counsel for the plaintiff examined several of the nobility and principal gentry of the county of Worcester, who frequently and familiarly conversed with the testator during that whole period, and some on the day whereon the will was made; and also two eminent physicians who occasionally attended him, and who all strongly deposed to the entire sanity, and more than ordinary vigour of the testator. Other testimony corroborative of this, was adduced; the validity of the will was established, and subsequently several of the defendant's witnesses were tried, and convicted of perjury.*

VI. *Of the deaf and dumb; their capacity, and the morality of their actions.*

On this subject, little can be found in our jurisprudence; but the general rule deducible from adjudications, both in civil and criminal cases, is, that they must be judged of according to the intelligence and knowledge they are known to possess. A deaf and dumb person, educated at the present day under Sicard or Braidwood, or in one of the establishments of our own country, may certainly be deemed to understand the morality of actions much better than one who has never had that advantage; and he accordingly would more readily be put in possession of his civil rights, or be punished for any offence against the laws.†

* Sir William Blackstone's Reports, vol. 1, p. 365. *Lowe v. Joliffe*. There is a curious case related in Scotch law books, of a man obtaining the signature of a deed from his wife, whilst she was in extreme labour pains. The judges decided that she was not at that time in the full exercise of her reasonable faculties, and revoked the deed. This happened in 1686.

† "A person born *deaf, dumb and blind*, is looked upon by the law as in the same state with an idiot, he being supposed incapable of any understanding, as wanting all those senses which furnish the human mind with ideas." But if he *grow* deaf, dumb and blind, not being *born* so, he is deemed *non compos mentis*, and the same rule applies to him as to other persons supposed to be lunatics. (Blackstone, vol. 1, p. 304.) See, also, Dyer's Reports, 56, a. *Yong v. Sant*.

The Code of Justinian appears to have considered the deaf and dumb as incapable of receiving instruction, and unworthy of having civil rights; as it declares that they shall not have the power to make any will or disposition of property, or to free a slave. (London Journal of Education, vol. 3, p. 204. "The disabilities which the Roman law and the older codes of every European Jurisprudence imposed on the deaf and dumb, were all founded on the principle, *surdus natus est mutus et plane indisciplinabilis*, as Molinæus has it." Edinburgh Review, vol. 61, p. 219. *Amer. Edit.*

A person born deaf and dumb, is competent as a witness, provided he evinces sufficient understanding. This was decided in the following case :

At the Old Bailey, January sessions, in 1786, on the trial of William Bartlett for simple grand larceny, John Ruston, a man deaf and dumb from his birth, was produced as a witness on the part of the crown. Martha Ruston, his sister, being examined on the *voir dire*, it appeared that she and her brother had been, for a series of years, enabled to understand each other by means of certain arbitrary signs and motions, which time and necessity had invented between them. She acknowledged that these signs and motions were not significant of letters, syllables, words or sentences ; but were expressive of general propositions and entire conceptions of the mind, and the subjects of their conversation had in general been confined to the domestic concerns and familiar occurrences of life. She believed, however, that her brother had a perfect knowledge of the tenets of Christianity ; and was certain that she could communicate to him true notions of the moral and religious nature of an oath, and of the temporal dangers of perjury.

It was objected by the prisoner's counsel, that although these modes of conveying intelligence, might be capable of impressing the mind with some simple ideas of the existence of a God, and of a future state of rewards and punishments, yet they were utterly incapable of communicating any perfect notions of the vast and complicated system of the Christian religion, and thence the witness could not with propriety be sworn upon the holy gospels. The difficulty of arraigning a man for perjury, whom the law presumes to be an idiot, and who is consequently incapable of being instructed in the nature of the proceedings against him, was also urged against the admissibility of the witness.

But the court overruled the objection, and John Ruston was sworn to depose "the truth ;" and Martha Ruston, "well and truly to interpret to John Ruston, a witness here produced in behalf of the King against William Bartlett, now a prisoner at the bar, the questions and demands made by the court to the said John Ruston, and his answers made to them." The prisoner was found guilty, and received sentence of transportation for seven years.*

* Phillip's Law of Evidence, p. 14. Leach's cases in Crown Law, p. 455.

In Scotland the deaf and dumb may be witnesses, if of sufficient intelligence to understand the nature of an oath. Thus the chief witness in a case of rape was deaf and dumb, but had been instructed, and her intelligence proved by an examination of her teachers.*

In France, if the accused cannot write, some person intimate with him, is to be appointed his interpreter. So also with a deaf and dumb witness. If they can write, the inquiry is to be conducted by question and answer.†

The deaf and dumb are also allowed to obtain possession of their real estate, if they show sufficient understanding. A female so situated, on attaining the age of twenty-one, applied to Lord Hardwicke (1754) for this purpose. Having put questions to the party in writing, and she having given sensible answers thereto in writing, the same was ordered.‡

As to criminal cases, the following may be cited: a deaf and dumb person was indicted for larceny in Massachusetts, and being set to the bar for his arraignment, the solicitor general suggested to the court that he was deaf and dumb, but that the evidence would prove him of sufficient capacity to be a proper subject for a criminal prosecution, and that he had formerly been convicted of larceny, and he moved that one *Nelson* then in court, and an acquaintance of the prisoner, should be sworn to interpret the indictment to him, as it should be read by the clerk. The indictment was accordingly read by a sentence at a time, and *Nelson*, having been sworn, explained its purport to him, making signs with his fingers. After which, the court ordered the trial to proceed, as on a plea of not guilty.§

A very curious case came before the court of justiciary in Scotland, on the 1st of July, 1807. The prisoner, *Jean Campbell*,

* *Alison's Practice of Criminal Law of Scotland*, p. 436.

† *Code D'Instruction Criminelle*, art. 333.

‡ *Dickenson v. Blisset*—1 *Dickens' Reports*, p. 268. See also on this subject generally, *Johnson's Chancery Reports*, vol. 4, p. 441—*Brower v. Fisher*.

§ *Massachusetts Reports*, vol. 14, p. 207. *Commonwealth v. Timothy Hill*. A similar case occurred at the Old Bailey in 1773. One *Jones*, being deaf and dumb, was indicted for stealing. A person, to whom he had been in the habit of communicating his ideas by signs, was sworn as an interpreter to him. The trial proceeded and he was convicted. *King v. Jones*. (*Leach's C. C. Cases*, p. 120. See also *King v. Steel*, *Ibid.* p. 507.)

By the law of the state of Ohio, if a person stands mute, a jury is to try whether he is so by the act of God, and if they find this, he is to be remanded to prison, and not proceeded against, until he recovers. The Reviewer very properly asks, what is to be done with a person born deaf and dumb. (*American Quar. Review*, vol. 10, p. 46.)

alias Bruce, was charged with murdering her child, by throwing it over the old bridge at Glasgow. Mr. McNeil, her counsel, stated an objection against her going to trial, on the ground of her being deaf and dumb from her infancy, and that he was totally unable to get any information from her to conduct her defence.

Mr. Drummond, counsel for the crown, now gave in a minute, stating that he was satisfied of the prisoner's being deaf and dumb from her infancy, but he offered to prove that she was capable of distinguishing betwixt right and wrong, and was sensible that punishment followed the commission of crime.

He then called the following witnesses:

Thos. Sibbald, keeper of the jail. Prisoner has been two months in the jail of Edinburgh; conducted herself rationally; made signs to the turnkey of a certain description when she wanted any thing, and when the articles were brought her she seemed satisfied; he has also seen her make signs to herself, as if taking something out of her breast and counting it with her hands; and that when she came first into prison, she clasped her hands together and made a sign as if something had fallen from her back, and seemed to indicate distress of mind; that he has seen her weep while in prison; and upon certain kinds of food having been brought to her, he has observed her express herself as if satisfied; and when she was weeping, as before mentioned, she made the same signals as if something had fallen from her back.

Robert Kinniburgh, teacher of the Deaf and Dumb Institution, deposed, that he had seen the prisoner once in the jail at Glasgow, and repeatedly in the jail of Edinburgh; that he has had communication with her by means of signs; in general he understood her, but in particular instances he did not; that she, by her signs, communicated to him the circumstances which took place relative to her child; that the death of her child was altogether accidental, and that when it happened, she was intoxicated; that she communicated to him, that upon that occasion the child was upon her back, covered with her petticoat and duffle cloak: and as he understood her, she had held them together upon her breast with her hand, while she rested the child upon the parapet of the bridge over which the child fell while she was in the act of putting her hand in her breast, where she had money, and which she was afraid was lost, and by so putting her hand in her breast he understood she had lost hold of her child, at which time the child was asleep,

and had then fallen over the bridge. She communicated to the witness, that before the act, she had that day drank eight glasses of spirits. That his communications with the prisoner chiefly turned upon the accident, and that she seemed to understand him about as much as he understood her; that is, in general, but upon some particular occasions she did not; that she can make the initial letters of her name, but inverts them, C. J.; and when she does so, points to herself, which leads him to think she understands them: that she makes two or three other letters, but is not sure if they denote her children or not. He understood from her that she had three children, and that the one the accident happened to was one of them; that he rather suspected that she was not married, as the children were to different individuals; that as far as the communications could take place betwixt him and the prisoner, she is a woman of strong powers of mind: that nothing appears to have been wanting, humanly speaking, to have saved her from the pitch of depravity she appears to have attained, but some hand to have opened for her the treasures of knowledge in proper time: that he conceives that the prisoner must be possessed of the power of conscience in a certain degree, and that she seems a woman of strong natural affection towards her children, as he was informed by persons at Glasgow; and which she manifested by the indignant denial of the charges of having wilfully killed her child, and her immediate assertion that it lost its life by accident; as well as from observations he has made as to the state of mind of other uneducated deaf and dumb persons, and particularly in one instance, in the report of the Institution for 1815, page 54, he is of opinion, that if not blunted by intoxication, these feelings must have convinced her of the criminality of bereaving her child of life. That in his communications with the prisoner, he was satisfied she was sensible of the criminality of theft, but he cannot say any thing as to the abstract crime of murder in general. That she communicated to the witness her indignation at the fathers of her children for the way they used her, and one of whom she has sometimes represented as her husband. That sometimes he could not understand whether she understood the ceremony of marriage or not, or sometimes wished to evade the questions, or did not understand them; that he has seen her use the form of a ring as a token of marriage; and she made signs that that had been taken away by the man she called her husband:

that is to say, that the marriage had been dissolved by him, and he had taken another wife. That from what he saw of her at Glasgow, as well as what he observed in the jail of Edinburgh, he is convinced she was aware that she was to be brought at Glasgow before a court of justice, and that he was confirmed in this from his having a conversation with a woman there, who seemed to understand her signs perfectly well in general; and who mentioned to him that she had made signs to her with regard to the dress of the judges: that he understood that she connected the death of her child with her appearance in court. (Being interrogated by the court whether he is of opinion that the prisoner could be made to understand the question, whether she is guilty or not guilty of the crime of which she is accused?) Answers—that from the way in which he put it, by asking her by signs, whether she threw her child over the bridge or not? he thinks she could plead not guilty by signs, as she has always communicated to him, and this is the only way in which he can so put the question to her; but he has no idea, abstractedly speaking, that she knows what a trial is, but that she knows she is brought into court about her child. That she has no idea of religion, although he has seen her point as if to a Supreme Being above; and communicates merely by natural signs, but not upon any system; that he could not obtain from her, information where her supposed husband is, or what was his name; neither could she communicate by natural signs any particular place, unless he had been at that place with her before, or had some mark for it; and that she could not communicate to him about any person unless there was some sign by which he could bring that individual to her recollection, or had been seen together in certain circumstances; that in referring to the accident, the prisoner communicates that there was a baker's boy near her who heard the child plunge into the water and gave the alarm, and that upon this she laid her hands upon the ears of her little boy near her, but for what purpose he cannot say, unless to prevent him from crying out.

Here the court expressed a wish to see Mr. Kinniburgh put the question to the witness in open court, and she answered by signs in the same manner as he had described.

The Lord Justice Clerk thanked Mr. Kinniburgh for his attention, and the assistance the court had derived from his professional skill.

Dr. William Farquharson stated, that he twice visited the prisoner in the jail of Edinburgh; on the first occasion alone and on the second, along with Mr. Kinniburgh and another gentleman: that she fully satisfied him that she was not feigning to be deaf and dumb: and that when he first saw her, she did not seem to understand his signs so well as after being visited by Mr. Kinniburgh; and the witness made that observation to Mr. Kinniburgh himself: that he had communications the first time with her as to the loss of her child, and used signs in regard to a child then in prison, as if throwing it away; upon which she made the same signs as to the accident, as she has now done to Mr. Kinniburgh in presence of the court: that she appeared to the witness to know as little of the distinction between right and wrong, as a child of six months old; and that she did not appear to be conscious of having done any thing wrong whatever in regard to the child: that in giving the above opinion, he has formed it from the facts of the prisoner having been both deaf and dumb, and having received no education whatever.

John Wood, esquire, auditor of excise, [who is deaf and partially dumb,] gave in a written statement upon oath, mentioning that he had visited the prisoner in prison, and was of opinion that she was altogether incapable of pleading guilty or not guilty; that she stated the circumstances by signs, in the same manner she had done to the court, and seemed to be sensible that punishment would follow the commission of a crime.

The court were unanimously of opinion, that this novel and important question, of which no precedent appeared in the law of this country, deserved grave consideration, and every information the counsel on each side could procure and furnish. The court then ordered informations on each side to be prepared and printed.

At a subsequent period, the judges delivered their opinion as follows:

“Lord Hermand was of opinion that the pannel [prisoner] was not a fit object of trial. She was deaf and dumb from her infancy; had had no instruction whatever; was unable to give information to her counsel—to communicate the names of her exculpatory witnesses, if she had any; and was unable to plead to the indictment in any way whatever, except by certain signs.

which he considered, in point of law, to be no pleading whatever.

"Lords Justice Clerk, Gillies, Pitmilley and Reston, were of a different opinion. From the evidence of Mr. Kinniburgh and Mr. Wood, they were of opinion that the pannel was *doli capax* *quoad* the actual crime she was charged with. It was true that this was a new case in Scotland, but in England a case of a similar nature had occurred. One Jones was arraigned at the Old Bailey in 1773, for stealing five guineas. He appeared to be deaf and dumb. A jury was impannelled to try whether he wilfully stood mute, or from the visitation of God; they returned a verdict 'from the visitation of God;' and it having appeared that the prisoner had been in the use of holding conversation by means of signs, with a woman of the name of Fanny Lazarus, she was sworn an interpreter. He was tried, convicted, and transported. In the present case, the pannel had described to Mr. Kinniburgh most minutely the manner in which the accident had happened to her child; and from the indignant way in which she rejected the assertion that she had thrown it over the bridge, it was evident she was sensible that to murder it was a crime. It was also observed by Lord Reston, that it would be an act of justice towards the pannel herself, to bring her to trial; for if the court found she was a perfect *non-entity*, and could not be tried for a crime, it followed as a natural consequence, that the unhappy woman would be confined for life; whereas if she was brought to trial, and it turned out that the accident occurred in the way she described it, she would immediately be set at liberty. The court found her a fit object for trial."*

* The first part of this case I have taken from an English newspaper, and the opinion of the judges, from Smith's Forensic Medicine, p. 430.

"The sequel of this is worthy of record. The woman was brought to the bar, and the indictment read in the usual form; the question was then put, guilty or not? Mr. McNeil, the counsel for the prisoner, then rose, and stated that he could not allow his client to plead to the indictment, until it was explained to her that she was at liberty to plead guilty or not. Upon it being found that this could not be done, the case was dropped, and she was dismissed from the bar *simpliciter*. Thus, though it is established that a deaf mute is *doli capax*, no means have yet been discovered of bringing him to trial.

"Another interesting discussion took place last winter in the High Court of Justiciary, as to whether or not a deaf mute was capable of giving evidence. A rape had been committed on a deaf and dumb girl, and her evidence was objected to by the counsel for the prisoner, who argued, that though it was admitted to the fullest extent that she had a perfect idea of the existence of a Supreme Being and a future state, and though she might be perfectly convinced of the obligation under which she lay to speak the truth, yet every one had as perfect a knowledge at least of these facts

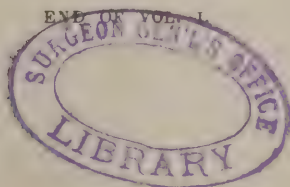
A case quite similar occurred at the York Assizes in England. in 1831. The prisoner a girl deaf and dumb, was indicted for the murder of her infant bastard child. Through an interpreter, she plead not guilty. She was then asked, through the interpreter, if she desired to challenge any of the jurors. The interpreter informed the court that he could not make her understand what was meant. "I cannot (he said) make her understand any thing she has not seen before. I *can* make her understand what she was brought here for, but I cannot make her understand for what purpose she now stands in court." The Judge (Parke) impanelled a jury, to try whether she was sane or not, and testimony to the above effect, having been given by two witnesses, the jury were directed to inquire whether the prisoner is sane, not whether she is at this moment labouring under lunacy, but whether she has at this time sufficient reason to understand the nature of this proceeding, so as to be able to conduct her defence with discretion. The jury returned a verdict that she was insane.*

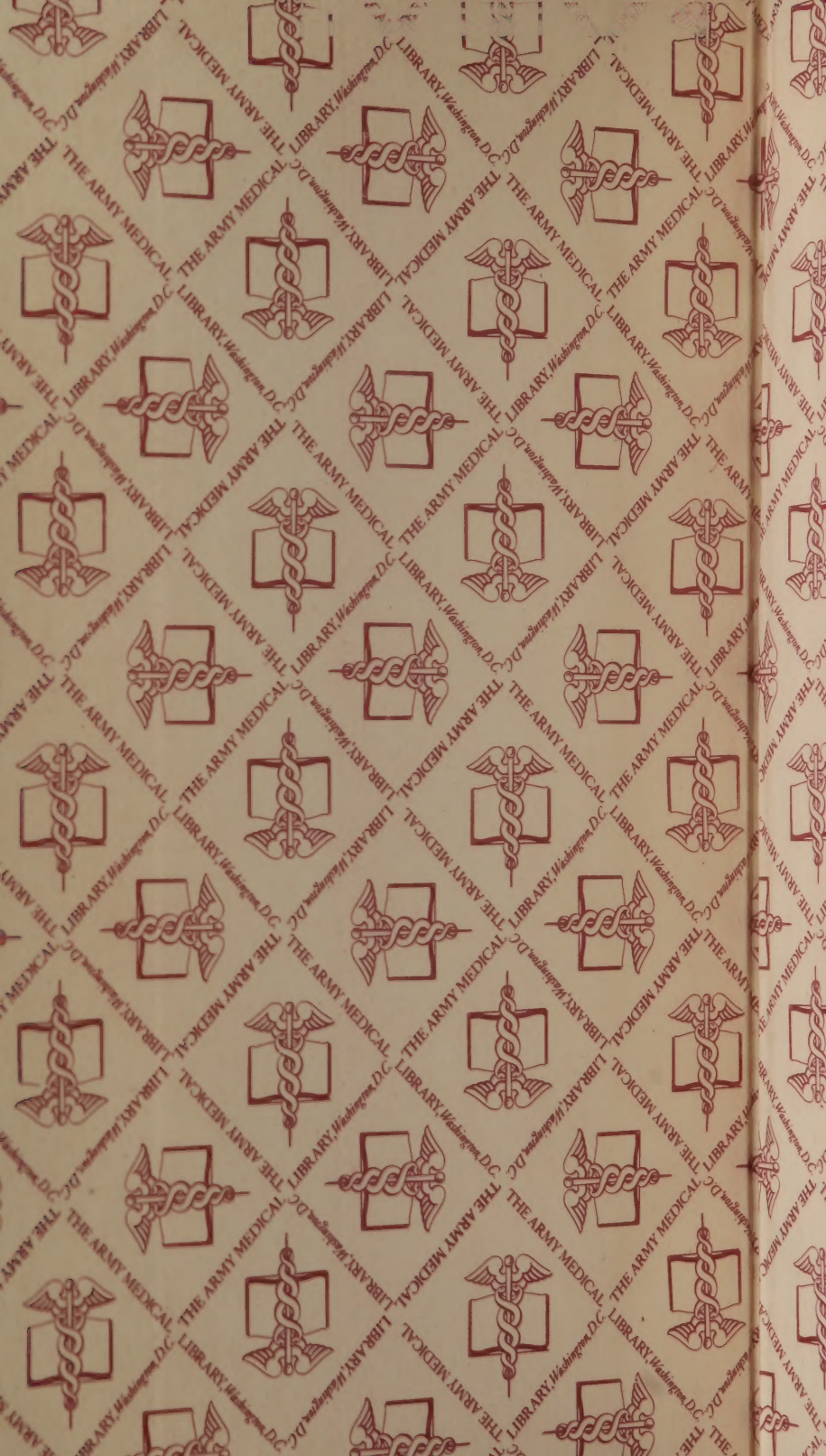
There are several points connected with the subject of mental alienation, which properly belong to MEDICAL POLICE. Of this nature are the general causes, and the possibility of their removal; the treatment the insane should receive, and the care that the government should bestow on their safekeeping.†

and obligations as she could possibly have, yet their testimony went for nothing unless confirmed by an oath; and as it was obvious that she could not give an oath, her testimony must go for nothing." DUNLOP.

* Lewin's Crown Circuit Reports, p. 65. Case of Esther Dyson.

† There have been some recent trials of deaf and dumb persons for robbery, in Paris. They appear to have been uneducated, and were acquitted. (*Causes Célèbres du xix siècle*, vol. 4, p. 193.) One of the cases is noticed in the *American Jurist*, vol. 3, p. 158.







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